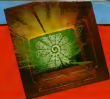


FOR THE
AMSTRAD
PCW 8256-8512

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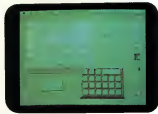
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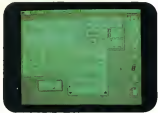
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DESK ACCESSORIES



The AMX Mouse package also includes a number of extra functions which are available for use at all times from the desktop. These include a jotter, alarm clock, calculator, puzzle and control panel – the type of tools found on a real desk top!



STOP PRESS... STOP PRESS...

There will be a growing list of further mouse compatible software for the Amstrad PCW from AMS and other leading software houses in the coming months including Graphic and Desktop publishing programs.

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Daylight robbery

We have to report to you a sad tale of attempted bribery and corruption in high places.

Software house Rainbird have recently released a game called *Guild of Thieves*, and to promote this they sent round a press pack to 8000 Plus. But no ordinary press pack this – delivered by a furtive looking gentleman, the large box contained some blurb, some packaging, a bag marked 'Swag', and a bottle of wine.

All we want to say is that if Rainbird think that they can sway

the 8000 Plus team into giving free publicity to a product on the strength of this kind of gimmick, they are quite wrong. We need at least a case of wine for that.

Oh, and after inspecting the blurb inside the pack it turns out that the game is only available for Amiga computers. Even though PCW's can run this software, we are keen to hear of any more Amiga programs being released – as long as they have a similar press pack.



Soaraway success

The 8000 Plus/Rainbird Starglider competition has finally drawn to a close, and the time has come to put the winners out of their agony. As you will recall, the challenge was to make the 'best' sentence possible composed solely of the letters in 'Starglider'. The most popular words seemed to be 'Tiger', 'Garter' and 'Israel'.

Entries ranged from the simple but effective line, "Great art is a rated diet: eat large, digest later" (Mr. C.E. Nurse), through limericks, poems, soap operas, and finally a potted version of King Lear. Shakespeare had it easy – he had all those extra letters to work with.

Here are a couple of entries, selected from the ten winners. Congratulations to all the ten below, who receive a copy of Starglider. Thirty more runners up (too many to list, sorry) will have a

Starglider balsa wood glider flown to them.

"I staged Lear at last – it's a sad tale – I tried it as a serial: gales rage as Earl G. glares at 'Is lad Edgar; later, aged Lear rails at sired girls, 'til 'e dies; I'd a regal dirge as a trailer: it's a great idea!"

– Ray Berry

Girls' garters are red, said a sage
Girdles are large, it's a rage
Great ideals die sterile

As I regard retiral
Is it art, is it rite, is it age?

– Sandy Leitch

G. Agbogun, Plumstead, London; Ray Berry, Molescroft, N. Humberstone; C.E. Nurse, Hasby, York; Sandy Leitch, Cornie Village, Dunfermline; M. O'Toole, Woodford Bridge, Essex; M.K. Scott, Marlborough, Wilts; G.L. Sykes, Perth; Tricia Tills, Heavitree, Exeter; Miss D.J. Twiney, Auchincloath, Lanark; R.E. Tye, Ealing, London.

sunny side up

Editorial columns in magazines can become depressing things. The trouble is that they get written late at night as deadlines loom, when the editor is perhaps not viewing humanity with the most positive light.

For a change, how about a bright, positive view of the future? In the last five years we have witnessed an astonishing revolution in computers. Something equivalent to the PCW would have cost you a few thousand pounds in 1980, and you would have had to employ a specialist to install it. Now you buy a computer like you buy a hi-fi.

There is no reason to think this trend won't carry on in the coming decades. Amstrad's success proves that hi-tech equipment can be sold to the mass market, if it is properly presented.

The graphics capability of computers is getting better and better. In the not-too-distant future we will have TV-quality animation on our screens. Floppy discs will be replaced by memory cards, removing another failure-prone mechanical element from the field. The keyboard will stay as the main input device, because voice recognition is still too difficult. The limiting factor is mechanical engineering – robots are still impractical because we can't come up with mechanisms capable of movements as flexible, delicate and powerful as the human arm.

When the oil runs out, the world will keep going more or less unchanged thanks to high speed video and electronic communications links. There will be no need for people to leave their own country on business, and holidayers will have to resort to boat and train.

The biggest barrier to advance is not with technology, but with social attitudes, and in particular the resulting unemployment problem caused by increased automation. The science-fictional view of a cashless society with the menial jobs done by machines isn't that far away – if we want it. Here's to the future.

Be Taylor

Split personality

Despite our move to the new plush penthouse offices in Bath, 8000 Plus has kept its outpost in darkest Somerset for the processing of subscriptions and special offers.

In the good old days we were all on one site and the editorial team

could pass misadvised subscription letters downstairs, and the mail order team pass PostScript letters and so on upstairs. Alas no more.

To avoid inevitable delays and letters being mislaid, please make sure that Subscription and Mail Order items go to Somerton, and all editorial mail goes to Bath. The addresses are on the contents page. If you want to be awkward and write to both editorial and mail order, and you really can't afford a second stamp, then please at least put the different letters on different sheets of paper.

**8000
PLUS**

The August issue of 8000 Plus will be on sale on Thursday July 9th. Don't miss it!

Through a screen darkly



If you are regularly spend long hours in front of your PCW screen, your eyes might be interested to know of a couple of new filter screens hitting the market. In the last month screen filters have appeared ranging in cost from £17.95 to £69.50.

At the top end of the market you can get a Kareware Screenshield (01-608 0082) which looks more like a roller blind than a VDU screen. It has an elaborate diagonal filter system to combat glare and is earthed to drain away electrostatic charges which are said to cause "increased sensitivity to stress through the disturbance of the natural ion balance in the atmosphere". And you thought it was because you couldn't get that

listing to work. Screenshield is available for all shapes and sizes of VDU but the version to fit the PCW costs £69.50 + VAT.

Or you could invest only £17.95 on a screen filter from Alfa Electronics of Surbiton (01-390 2588) made specifically to fit your PCW. The screen is contoured to fit snugly around your VDU screen. Velcro pads fit it so closely to the casing that you won't hardly know that it wasn't part of the screen. Even the grey plastic frame has been chosen to match the grey of the 8256 closely – it's not such a close match for the 8512. And more importantly it will save you eye-strain by cutting flicker and reflections and improving the contrast on screen.

IT'S MY PROGRAM... HONEST

A new company has been set up to store computer programs with the idea of guarding against copyright problems. The National Software Register also claim to provide an effective safeguard against your hard work being lost by accident (anything from a fire to formatting the wrong disc in DISKET).

The idea is that you send a hard copy of your program (ie. listed on paper) and in return get a Certificate of Registration and a number (the NSR code). They take a copy of the program and store it in different places so that there is little chance of both copies being lost. Then if at any time there is some dispute about the copyright of your program the company will

be provide an affidavit to the effect that this work has been in their possession from the date of registration.

Up until now the same effect has been achieved by registering the program with a solicitor or using the old method of sending yourself a letter (making sure the date stamp is clear) and then depositing it unopened with a bank.

The company also offer help with advice on copyright regulations where possible. But you have to pay for this service: registration costs £28, and an annual fee upwards of £5 depending on size. To protect your future fortunes, ring the NSR on 01-367 9700.

ON WITH THE SHOW

If you're interested in what's going on in the Amstrad scene, you might like to visit the Amstrad Computer Show at Alexandra Palace, London, which runs from July 10th to 12th.

Companies with products for the whole range of Amstrad computers – CPC, PCW and PC – will be there, with a host of established and new products to tempt your cheque books with. Due to extra interest shown by exhibitors the show has outgrown

its old home at the Novotel where the first seven shows have been held. Alexandra Palace will provide an extra 50 per cent of floor space to cram in all the new exhibitors – a quarter of the companies will be there for the first time.

Entry is £3 on the door for adults, £2 for under 16's. And once you are in, why not drop round to see the Future Publishing stand and see who actually writes 8000 Plus?

And now
the PCW 9512

More rumours about Amstrad's possible intentions for the PCW around this month. Following hard on the rumours that the 8512 is being phased out, the latest theory is that Amstrad are planning to launch a revamped version of their twin drive PCW later this year. And their sources have even come up with a new name for it – the 9512. This story appeared in the trade paper Microscope, which was the first publication to print the correct details of the PC1512 while Amstrad were still denying that it existed.

While it looks more likely than ever that the dual drive PCW's bigger capacity B drive will be exchanged for a second drive of the size of the present A drive, the new machine will make up for the loss by having an improved keyboard, a built-in Centronics printer port and, most significantly, a quality daisywheel printer as standard.

All this, Microscopes suggest, might come for the same price as the 8512 (£499 + VAT). In the meantime, their story wonders if the 8256 might be given a boost by dropping its price to £299, but Amstrad aren't famous for price-cutting. The expected launch date would be in September.

Another rumour circulating at the moment suggests that there are dual drive Amstrad machines that look suspiciously like 8512s floating around on evaluation – the only difference being that they have two 3½" disc drives instead of the old 3". This would have the obvious advantage of bringing the PCW in line with most recently introduced computers which have accepted the 3½" as standard, such as the Atari ST and the new IBM range.

It was always thought that Sugar only opted for the largely defunct 3" drive because when they fell

from favour he was able to pick up a large number of the almost obsolete drives very cheaply. Now getting supplies of 3" drives might not be so easy, and moving over to the new industry standard would seem to boost the chances of a long term future for the PCW.



"GREAT PROGRAM THIS - IT LISTS ALL THE LATEST AMSTRAD RUMOURS"

A successful re-organisation of the business end of the Sugar empire would certainly help to confirm Amstrad in their position as being by far the biggest selling computer firm in Europe.

A recent survey from the International Data Corporation attributes Amstrad with about a third of the entire European sales. The report states that the firm sold 1.75m machines last year over half a million more than its nearest rivals Commodore and roughly four times IBM's sales.

The report also states that in 1986 Amstrad's sales had increased more than 125 per cent.

GETTING IT STRAIGHT

In this era of computer technology the most difficult operation you have to tackle on your PCW is getting the paper straight in the printer. But now the add-on manufacturers have started to tackle this problem with two paper straighteners being launched recently.

Kado, the PCW accessory manufacturers, have taken over a new product to add on to their range of add-ons – a paper guide and width scale for the faithful PCW printer called the Feed'n Print. This simple device originally marketed by Chromodynamics Ltd but has been given a new lease of life, not least by the fact that Kado have introduced a price cut, pitching it at £6.50 – around a third off.

This, they claim, will make Feed'n Print the cheapest paper straightener currently on the market. The idea is that you slip the guide over the plastic paper tray on your printer.

Feed'n Print has a scale marked in inches, 10-pitch and 12-pitch characters. Adjust the sliders to suit and thereafter you can just drop sheets of paper in and they will be lined up perfectly straight every time. Kado Enterprises can be contacted at 0784 252662.

Another similar product comes from Alfa Electronics (01-390 2588) who have come up with a completely new paper tray which replaces the old one. You then adjust the sliders to suit any size of paper. Thereafter you can guarantee that the single sheet paper will go in straight. For today's design-conscious society, the tray comes in six different colours and costs £12.90.



OUT OF THIS WORLD

And now for something completely different. The 45th World Science Fiction Convention is being held in Britain this year, for the first time since 1979. Over the August bank holiday weekend, around 5000 fans from all over the world will descend on the Metropole Hotel in Brighton for films, quizzes, books, games – or just the chance to chat with a name you've only ever seen before on a bookshelf.

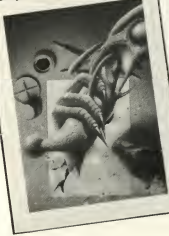
So why might this interest 8000 Plus readers? Well, for one thing star columnist David Langford is the 'special fan guest'. Accost him in the bar, say how much you like his writing, and he will let you buy him a drink.

Secondly, computers are playing

a large part at this year's convention. The PCW is the foremost machine for the country's amateur writers, and there will be an opportunity to pick up impartial tips on production methods for low-cost publications, what other hardware and software can be used, all from users rather than manufacturers.

Conspiracy '87, as the convention is called, runs from 27th August to 1st September. The price for the whole weekend (excluding hotel bills) is £38.00 if you register in advance, and slightly more on the door – write to Conspiracy '87, PO Box 43, Cambridge CB1 3J for more details.

CONSPIRACY '87 PROGRESS REPORT 2



WHICH PRICE?

The shopper's watchdog magazine Which? has voted the PCW8256 'good value for money'. Quite impressive you may think. But the only problem is the magazine seem to have priced the machine at about £125 more than it actually costs.

Which? gave their good value tag to the machine when they thought it cost £575 and suggested that the PCW8512 was even better value at only £550. If we could get an 8512 at £25 less than the 8256 we would think it was good value too. The standard prices as far as we know them are £399 (plus VAT) for the 8256 and £499 (plus VAT) for the 8512.

A call to the Consumer Association confirmed that they knew that there had been some confusion over the price. A spokesman said "When we quoted a price for the 8256 we included the cost of an upgrade to dual drive. We know we didn't make that very clear." While it is just about possible to get an upgrade kit for around the extra £125, the full Dictaphone upgrade would cost you more than £250. They claimed that their price for an 8512 was an average.

The machines never scored less than average on any of the features it was tested on although the only section where it was commended was on noise (or presumably the lack of it) and the keyboard got a half hearted pat on the head.

The PCW also got a pat on the monitor from Channel 4's 'what it's worth' program recently.

Club together

The PCW Users Group – an independent group of PCW-owning enthusiasts – have just launched a new Mail Order service. This organisation will provide software from simple turnkey discs for the beginner to extensions to Maltard Basic for graphics and sprites for more proficient programmers.

One service that might particularly interest 8000 Plus readers would be the group's aim to provide software solutions to users' problems.

For information contact: The PCW Users Group, 8A Seascale Park, Seascale, Cumbria CA20 1HD

DESKTOP WARS

'Desktop Publishing' is very much the buzzphrase of the moment. Looking at the PCW scene it seems to be all happening at once. But in fact page make-up systems have been around for some time on other computers. In particular, the original was a program called 'Pagemaker' released in late 1985 for the BBC micro.

Pagemaker is now being adapted to run on the PCW under the new name 'Stop Press'. Its designer, Alex Blok of Tecnation, visited the 8000 Plus offices recently and told us some tales of past, present and future.

In the early 1980's, the computer that all thinking people used was the BBC micro. This particular machine was capable of producing some quite neat graphics and colours, but the software to take advantage of this didn't seem to be quite right.



▲ Alex Blok, the designer

In 1984, Alex Blok was looking at the prospect of doing some work for a graphics company when the idea for Pagemaker came to him. "At the time there were no page make-up systems around at all," he said. "Pagemaker was the very first program to mix text and graphics in this way."

So Alex began to design what would become Pagemaker and soon needed some working code to demonstrate to potential distributors. "I'm a designer – not a programmer. For one thing I'm not very good at the programming side but more to the point I just don't have the time. You can't do both things properly," he reckoned.

Alex was a regular of the Newbury Computer Club at the time and his eye was soon caught by one of the other members – Neil Lee. "I first saw Neil at the club. He was cracking the protection system on Elite which took him about ten minutes flat. No mean feat. I asked whether he would like to have a go coding up a few routines I had designed."

It soon became clear that Neil and Alex made an ideal team. They understood each other well – Neil immediately grasped Alex's design specifications, and could implement them efficiently.

Teaching an old dog

Tecnation, as they called the company, didn't want to get into marketing so they looked to Advanced Memory Systems for that. "AMS seemed to be an efficient and professional company and we've always got on well with them. They've supported us very well and they have got a superb after sales service. They seem to really care about the customer," he told us. As a result Pagemaker has been a huge success on the BBC. Appearing on the market in October 1985 it has sold 10,000 copies to date.

Since then Tecnation have converted Pagemaker to run on the Amstrad CPC6128, and are now putting the finishing touches to the PCW version. An American company called Aldus, who market a program called Pagemaker for the Apple Macintosh, have recently decided that they don't like AMS using the name too. Both sides claim they used the name first but to avoid the hassle of lengthy and expensive legal wrangles AMS are changing the name of all their Pagemakers to Stop Press.

Originally the programming required for Stop Press on the PCW was to have been contracted to outside companies. However after Tecnation had prepared two complete specifications for companies, who then folded, they decided to do it themselves and settled down to serious work in January 1987. Neil, the implementer, is only 20 years old and is still at university doing a degree in Computer Systems Engineering.



▲ Neil Lee, the implementer

Squeezing in

At the time of writing there have already been two desktop publishing programs released and another in the pipeline. So how does Alex feel that Stop Press fits into the market place?

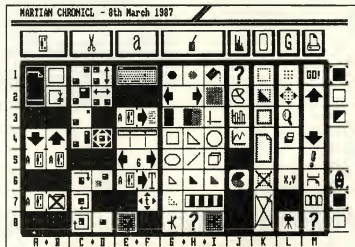
"Stop Press is simpler to use and more flexible than the others. I'm glad to be competing. People will always buy the best and ease of use is the most important thing. The Stop Press manual is going to be the best we've ever done. The whole point is you don't have to plough through the whole thing to get going. You can dip in as you

marketing. That's entirely up to AMS. For their part AMS don't influence the design of the product at all. As the designer Alex specified the kind of system he would want to use personally and judging from the response on the BBC he seems to have been pretty near the mark.

Pastures new

"Up to now computers have been bought by those who have enough know-how to use them properly. But there's a much wider market than that," Alex said. "The software has got to become a lot more reliable and friendly – better designed in short. People want to buy a machine which does a job for them without too much fuss, which comes with all the software they need properly integrated. I'd like to design that kind of machine although that would be a few years away yet. The current practice of having to work out what software you need and then spend £50 or more a go just can't last."

"Design is incredibly important. It isn't just a question of looks but a well designed product is efficient and easy to use. With British cars you usually don't get any real design behind what you buy until you get to really expensive models.



▲ The control panel for Stop Press, which gives you and your mouse total command.

need to. I'm writing it myself and I've spent three months on it so far.

Some people have suggested that DTP is being overhyped. What does Alex see as the main market for Stop Press? "I think desktop publishing interests hobbyists who want to produce interesting newsletters for their clubs, businessmen who want to design letterheads and invoices. That kind of thing. Some people expect it to be a full typesetting system. That would be nice but there just isn't the memory on an 8-bit machine to do that."

Tecnation doesn't have any connection at all with the

But good design means better aerodynamic efficiency. That's why the Italians are so good – they know the value of designing things carefully.

"I've got no formal training in design but it's an area that I would like to get more involved in. I'm thinking of taking time off to do an proper industrial design course," he said. Watch out World.

● Stop Press, the result of Alex's and Neil's labours, is being marketed by Advanced Memory Systems. It will be available in September, and the price will be £49.95. A package with an AMX mouse will be £79.95.

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ORGANISED AT LAST

Is it a calculator? Is it a diary? Is it a word counter?
No, it's Hotshot, here to beef up LocoScript.

HOTSHOT £34.95 • see Special Offers

There is no doubt that the program used on the PCW more than any other is LocoScript. And it is also true that recent months have seen the introduction of several desktop organisers that provide all those little extra features that you need to have at hand when running any program such as a calculator, calendar, notepad and so on. Of course, these organisers all run on CP/M and none are suitable for faithful old LocoScript.

So perhaps the most surprising feature about the new Hotshot desk-top organiser is that it has not been done before. LocoScript may not be the easiest thing for programmers to add things on to, but with the massive market available it would seem well worth the effort of creating such utilities.

The idea is that while using LocoScript you may need a number of facilities – an address book, a calculator, a diary, a calendar or even a word counter. The answer is to buy a program which hangs around in the background, which can be called up at any time at the press of a couple of keys to carry out these helpful functions. When you want to go back to LocoScript the press of another key takes you back to the exact spot you had left, all achieved in moments.

What kind of utilities do you want to have at hand while writing documents? How long is a piece of string? You could presumably go on forever adding to your list of wants, so the Hotshot designers have made their choice, bearing in mind the harsh realities of programming constraints.

One of the most useful additions to LocoScript's functions is Hotshot's word counter. This will be useful for writers, while mathematicians and scientists will be more than interested in the special features of the calculator. For business use the diary or the address book and the simple mail merge facility it offers might prove the main selling point while for the really paranoid the ability to

encode files so that they cannot be read without the correct password may prove well worth the asking price.

And for poor computer journalists who have to work late into the night to meet deadlines, the clock with the alarm that beeps and flashes up the message "It is now 4 am. Go to bed!" would prove a Godsend.

Keep it simple

Bearing in mind that not all LocoScript users are keen computer buffs Hotshot has been designed to be simple to use (especially if you have a working knowledge of LocoScript) and hopefully foolproof. This starts with the process to adapt LocoScript to take the new program.

The first time you use Hotshot you must make up a new LocoScript Start of Day disc. Hotshot does this for you – when asked, put in the Hotshot, LocoScript and blank formatted discs at the right moments. Whenever you start up with this new disc you will have Hotshot available. At present, Hotshot will only work with LocoScript v1.2 and, if you have an 8512, LocoSpell and LocoMail – not LocoScript 2.

Hotshot loads itself into 40k of the M disc, and you can call it up at any time by simply pressing [SHIFT] and the 'screen' button (the key with the grid on it in the middle of the cursor keys). You don't need the disc in the drive again unless you want to save new addresses or notes for posterity.

Hotshot takes over the top four lines on the screen – the normal LocoScript menu area. A menu is displayed with all the function descriptions alongside the key to press to call them up – they are all found using the f-keys, sometimes with [ALT] or [EXTRA]. All of Hotshot's operations are displayed on these same four lines, so your LocoScript text is visible at all times.

Herein lies the awful dilemma that all programmers of organisers have to face – how much information can be packed into how little space?

Space? No problem

For many facilities, being crammed into four lines is no problem. The clock, alarm and word counter fit in the space easily. Hotshot doesn't use the fancy graphical representation of a calculator used by some other organiser packages, aiming at a plainer facade with more serious features. So again the space is not too much of a problem.

The compact calendar display is ingenious although it takes a bit of getting used to. You type in the month and year required and out comes a long row of numbers which are matched up with letters for the days of the week. To save space, the first digit of the numbers is displayed above the line (eg the 3 of 30 is above the 0) which does make it difficult to read at first.

The makers proudly claim that the calendar is correct from 1592 (the introduction in England of the Gregorian Calendar) to 9999 AD. We leave it to more astute brains than ours to prove this right or wrong – at least it seems correct for 1987.

Even the address book should not provide too many problems in the restricted space. Most addresses can be shown fully in the four lines available, and if more are needed then the display can scroll to fit the information required on.

Faster than an address book

More importantly there is a good find facility which will pull out the correct address from the stored mass with a speed that should beat looking in your drawer for your faithful old address book. Each entry is written on a new Hotshot 'page', and you can use the [COPY] key to copy the page direct into a LocoScript document – for instance an address into the correct place in a letter. Most of the defined keys used by LocoScript have the

Spaced out

Hotshot takes up 40k of space on your disc and M drive, or 64k if you have an 8512. You can customise the program to apportion this space as you like between the various facilities, increasing the number of addresses you want to store at the expense of other facilities, or vice versa.

Counting on Hotshot

The writers of Hotshot started off designing a simple calculator and seem to have ended up with a complex mathematical tool. It works well enough on the level of a simple calculator operated either from the number keys (the top line of the keyboard) or if you press [ALT] and [RELAY] you can use the numeric pad (the numbers on the cursor keys). You can work to 10, 2 or no decimal places.

But it really becomes interesting when you start to use its memory facility. For example you can choose a name for a variable and then give it the value that you want. For instance type

"r = 3.141592654 [ENTER]" and then "area = $\pi \times \text{radius} \times \text{radius}$ [ENTER]". If you want the area of a circle you just need to write "radius = 123 [ENTER]" and then "area [ENTER]" and you have your answer.

For those who know enough of these clever little formulas you should be able to store 176 of them in HOTSHOT if you allocate 16k of memory to the calculator – surely enough for anyone. If you can't find the formula you want in all these you can of course use the trusty old 'Find' facility again.

same use in Hotshot.

If you can't remember the exact name of the person you are looking for, you can scroll through the entries to find the one you want. The program automatically sorts your entries alphabetically when you leave it.

Limited space become more of a problem with the diary. This again allows you any amount amount of text to a page, although a really lengthy document would become unwieldy. Again you use the Find command to call up the correct page for any date.

For all those general things that you can't put an exact date on there is an ingenious page dated 00/00/00 for all these odds and ends. As with all the Hotshot features of this kind you can add or erase pages, although you can't erase this special page (you have to delete all the entries in it instead).

Take a note

A feature that should be one of the most useful – the facility to take notes – is the one most hampered by the lack of space. You can write pages of any length, scrolling back and forward, and you can copy them into a document. While the small display area may be considered a flaw, remember that many popular portable computers have the same size of display.

If you keep this in mind you can use the notes section to full advantage. The Find facility comes in useful here: since each page of the notes begins with a 'u' symbol, you can use the Find command to go to a specific page. So, if you had a load of interesting details about 8000 Plus, on a page especially about that esteemed organ, you can do a Find on "u 8000 Plus" which will go straight to that page without ploughing through every reference.

The word counter is of course something close to the heart of everybody who needs to write material to a fixed length. This one has the advantage that if you split your long documents up into several shorter files (as you should in LocoScript) you can count them sequentially and keep track of the total with a "Total Words" counter.

Unfortunately you have to place the cursor on the name of the file you want counted before you enter Hotshot, so counting a number of files can be a nuisance as you have to dodge in and out. Hotshot gets though a file at about 100 words a second.

The last function, the ability to encode any LocoScript file, is perhaps a bit more difficult to appreciate. Most writers are struggling to get their work read, not trying to stop people reading it. You can specify a password for any file on the disc, and to be able to print or edit that file you need to unlock it with the same password – handy for LocoScript-using spies.

The password can be up to 32 characters and until the file is decoded using exactly the same characters (even to upper and lower case) you can't even read the file, and would have to be a really enthusiastic hacker the get into it again. If you want to use this feature

Your time is up

The clock and date which show in the left hand corner of the Hotshot menu have to be set each time you start the PCW up. Otherwise the clock will just show the amount of time you have had the PCW running (an interesting enough fact at times).

Once the clock is set you can then use the alarm or timer. When you have set the time for the alarm the PCW will beep at the appropriate moment and

flash up the message you have entered. For instance you could tell yourself that Dallas is about to start in 5 minutes to make you appreciate the fact that you have a PCW to play with.

The timer works in the same way except you set the time you want to elapse before the beep. This is ideal for those times you say "I'll just write for an hour" and discover you've actually written for five.

PLUSES

- ☒ The only organiser that works with LocoScript
- ☒ Flexible enough to suit all kinds of users
- ☒ Impressive calculator and useful wordcounter
- ☒ For real enthusiasts the alarm can be invaluable

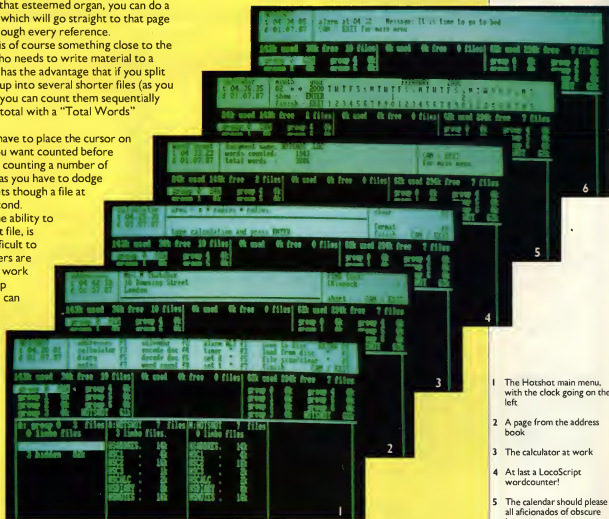
MINUSES

- ☐ Limited display space makes note-taking difficult
- ☐ Won't work with LocoScript 2

RANGE OF FEATURES
EASE OF USE

PERFORMANCE
DOCUMENTATION

8000 PLUS VALUE VERDICT



- 1 The Hotshot main menu, with the clock going on the left
- 2 A page from the address book
- 3 The calculator at work
- 4 At last a LocoScript wordcounter!
- 5 The calendar should please all aficionados of obscure leap years
- 6 Beep beep! The alarm goes off

it would certainly seem to be worthwhile choosing a codeword you will remember.

EXIT

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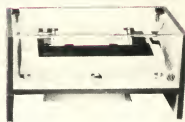
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File'nfind describes itself as a 'filing program' and specifically states that it is not a database. What this means is that it is intended to be a simple electronic filing cabinet. You type information in to it and can recall it later on. The endearingly home-drawn picture of a filing cabinet on the cover of the manual confirms this.

Essentially this program is aimed at home users who want to catalogue their book or record collection or perhaps the secretary of a club who wants to keep a membership list on computer. And no. This isn't another 8000 Plus mipsprint - File'nfind really does cost £9.95. So what do you get for your money and can a program costing this much really be useful?

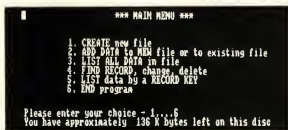
Despite its avowed pedigree of 'not being a database' File'nfind uses all the traditional database terminology. That is to say everything you want to store on a certain subject is stored in a 'file'. Each file is composed of 'records' and each record is composed of 'fields'. For example in the case of an address book, the whole book would be the file, an individual person's details would be a record, and the person's name, street, town, county, postcode and phone number would each be separate fields.

Suck it and see

The best way to learn File'nfind is to run it and experiment with the menus and the example files that come on the reverse side of the disc.

Before you can use your data you have to type it in. So the first thing you will want to do is pick the 'Create Database' option. You are then asked to pick a name for the database and define the layout it will have. A set of terse questions ask you how many fields you want and then for each one asks for a short name, a longer description and the length. You can correct typing mistakes at this stage but once you confirm your choice the only way to alter a file definition is to delete that file from the disc (using CP/M's ERA command) and redefine it.

Once the layout is defined, you can start adding the data. At the end of each record you are not asked whether you want to amend the data you just gave, to correct typing errors. If anything is wrong you have to go back to the main menu, choose the 'Find' command, locate the mistyped record and edit it.



▲ File'nfind's main menu

With all your membership lists or books safely on the system the Find and List options will be your main weapons. You have to specify the name of the file you are working with every time, which is annoying if you only have one. There is no concept of your 'current' file.

With Find, you can look for any field in a record. The search process is surprisingly fast but you can only look for complete fields. If someone's name is Cholmondeley-Farguharson you must type the whole name - not just 'Chol'.

The List option just takes a file and lists it out to the screen or printer. You can ignore certain fields so you

BARGAIN BASEMENT

There isn't much 'budget' software around for the PCW but here's a database that hopes to change all that

could get a list of just the titles or just the authors in a catalogue. Every item is prefixed on the list by its field name, which you usually don't want to know.

Finally, you can list all the records with a field of a certain value - a particular author for example. This is hidden under the menu option 'List data by record key'. Obvious really.

Verdict

Given a little programming skill this kind of filing system is very simple to produce with the PCW's standard tools, which is reflected in the rock-bottom price being asked for the program. With just a little more care at the design stage, File'nfind could have been superb value for money. As it is, although it is fast in operation, it is just not quite friendly enough for the kind of simple application it is intended for. It is remarkably cheap - but as ever, yer gets what yer pays for.



Back to BASICS

As is normal before running any program you might feel tempted to read the manual. However the author of File'nfind clearly felt that the profit margins on the product were not large enough for him to justify wasting his time explaining to normal people how to use his creation. The manual, six pages of typescript, reads like a set of programming notes for anybody who might want to delve into the program's innards. After you understand something of how BASIC works you will find it very hard going.

This is because File'nfind is written using the PCW's BASIC programming language and JETSAM file handling commands. It needs to be run in just

the same way that you would run anything that you typed in for yourself from our listings pages. That is to say you must start up CP/M, give the appropriate command to start BASIC, then type RUN "FNF".

A side effect of this is that File'nfind is a potentially good source of programming tips. BASIC's JETSAM system is known to be powerful but documentation is hard to come by. If you are a programmer you may well find that you can learn a lot by looking at the code. Of course the File'nfind comes as a protected file but 8000 Plus TipOffs readers all know by now how to unprotect such things.

PLUSES

- ☒ It's very cheap
- ☒ Has all the necessary features for simple inventories
- ☒ A potential source of tips for BASIC programmers

MINUSES

- ☐ Amateur and unfriendly way of working
- ☐ Maximum 8 fields per record
- ☐ Unhelpful manual full of programming jargon
- ☐ Cumbersome retrieval and editing facilities

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MAKE IT SIMPLE

First Calc £29.95 • Minerva Systems • 0392 37756

The idea of a spreadsheet is simple. So why is that few spreadsheets are simple to use? First Calc is another program in the Minerva 'Learner Friendly' series of programs, which aims to provide the most popular and useful PCW programs in an easily digestible form. With First Calc, they have tried to achieve a fast well designed spreadsheet that is adequate for most needs but still simple enough to be mastered in a short time.

While they have limited their ambitions for the program they have still managed to produce a perfectly workable program. This not just a beginner's program – it contains enough sophisticated features to suit the needs of most people.

First of all it is not really small. With a capacity of more than 5000 cells (52 columns by 99 rows) it should cater for most normal applications. It can handle numbers as large as 10^{99} and calculations can be performed to 14 significant figures.

What is a spreadsheet?

Ask the average computer illiterate in the street what a word processor is and they will tell you. Ask the same person what a spreadsheet is and you are likely to get a pretty blank stare. And yet there are few PCW owners who would not find a place for a good spreadsheet in their collection.

A spreadsheet is a computerised ready-reckoner. Think of it as a grid of cells arranged in rows and columns. You can fill these cells with text or numbers, and define formulae so that one cell might be the column total of all cells above it. In this way you can build up vast and sophisticated calculations –

very useful for cost estimating, simple accounting and general planning.

It is more difficult to explain how a spreadsheet works without showing it in action. Perhaps some of the reason is because software designers get so carried away with what esoteric features they can add that they lose track of the fact that most people only need very basic functions. The result is often a manual that needs a degree in mathematics to appreciate and a program that is at least 'user casual' if not downright 'user unfriendly'. First Calc sets out to reverse this trend.



things you
spreadsheet.

You can insert, delete or blank columns and adjust the width of columns at any time. You have a Goto facility for jumping around the sheet, you can toggle the direction of the calculation (so that it calculates horizontally or vertically) and you can define the automatic cursor direction (so that the cursor moves sideways, up or down after each entry).

You can even indulge in the mystical art of replicating, a handy facility to copy formulae from one cell to another – with all the references suitably changed. You can save any part of the sheet you want and print out selected parts. You can also export data to other programs such as LocoScript.

Setting up the spreadsheet is made easy with the toggle between formulae and values. When you want to add up the figures in a column you write in a simple formula in a cell to tell the program what to do. You can set up the sheet using the 'formulae-on' mode until you see you have it right and then toggle on to 'values' and the machine works out the figures you want.

Is it friendly?

So if there not much argument with what it can do, is there an argument with how it does it? Here there is more room for doubt. It is debatable whether First Calc is really more 'user friendly' than other more complex programs. The commands are logical and being more limited in range are perhaps easier to remember.

The manual is taken up with a couple of good tutorials based on a demo file – by far the best way of explaining the use of a spreadsheet.

Like virtually every spreadsheet with a wide variety of functions the program relies on mnemonic letters (keys chosen to be easy to remember) to pick the facility you want. Unfortunately the mnemonics in this case are not always logical. For instance why [ALT] O for "Insert a number of rows/columns", especially when "I" for Insert wasn't used?

There is also a sad lack of on-screen prompting. Even a list of the mnemonics available would have been an advantage. There is of course a HELP facility but to consult this is time consuming and it is perhaps not ideally set-up to be easy to extract the information you want.

This does not make it more difficult to use than the average spreadsheet program but it may not fully meet the makers claim to be considerably easier to use.

In the manual the program points out that it does not have the search/find features, the graphics or the virtual database facilities of some spreadsheets but then nor does SuperCalc2. You have to decide whether you are buying a spreadsheet or a general utilities program. Most people will be very happy with this reasonably priced package that is quick and efficient and easy to master. **EXM**

PLUSES

- ☒ A lot of room for the money.
- ☒ Good tutorials with demo files – the best way to learn the use of spreadsheets.
- ☒ Simple to use but reasonably sophisticated.

MINUSES

- ☐ No more user friendly than other spreadsheets.

RANGE OF FEATURES
EASE OF USE



PERFORMANCE
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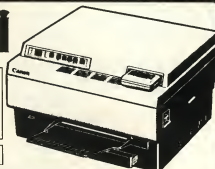
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Worth at least a thousand words

The BBC recently screened their Painting In Light series where famous artists had a chance to get to grips with a colour graphics drawing system (the Quantel Paint Box). Computer graphics at last could be seen to have entered the world of real art as these great men spoke glowingly of putting colour direct on to the glass of the VDU and the vibrancy of the shades.

The humble PCW with its choice of green or black perhaps has not reached these heady heights, but it is true to say that more attention is being paid to graphics now than ever before. At last it has been realised that it is possible to produce images on the screen and from the printer that are impressive in their own right.

This is despite the fact that it seems a graphics facility was the last thing Amstrad had in mind when they put the PCW together. The thinking would seem to have been that a word processor should not waste its time with anything as frivolous as pretty pictures.

The only concession from Amstrad was to hide somewhere on the PCW master discs that utility of myth and legend 'GSX'. Five pages of the manual hinted darkly that GSX was the key to high resolution graphics on the PCW, and rather unhelpfully explained that you could use it if you had a program that used GSX, but if you wanted to use it yourself this was beyond the scope of the manual.

Since then a brave few have struggled with the mysteries of GSX to tackle the kind of thing that six year old children are doing on their Sinclair Spectrums.

Luckily software manufacturers have been quick to exploit the fact that no matter how blasé you are with the way the PCW looks after words and figures, you will still gape with amazement at a good piece of graphics.

The first people to exploit the abilities of the PCW

most fully were probably the games manufacturers who soon realised that even the most serious PCW users want to take a bit of time off from all that heavy word processing and calculations to be silly for a while.

However, the need for graphics was most obvious to those users who have a serious design type of application. They needed programs they could use to make technical drawings and graphs with reasonable accuracy on the screen, and then print them out. People who want to use a computer exclusively for CAD (Computer Aided Design) work probably wouldn't buy a PCW, but it isn't at all bad at the job when properly used.

Horses for courses

When you have made the fateful decision to create an image on the PCW you are then faced with a fairly wide choice of how to do it. All the drawing packages will allow you to do this, but they do it in such different ways it is worthwhile looking closely at what suits you.

Graphics packages broadly fall into three categories. There are 'art' packages, that are intended to produce designs and pictures. These typically have a freehand drawing facility, a variety of patterns for you to fill areas of the screen with, a selection of pretty text fonts, and some rudimentary functions to draw squares, circles and so on.

Next come technical drawing packages. These are specifically designed to allow you to plot polygons, rule lines, label dimensions and that sort of thing. There usually isn't much in the way of freehand drawing options.

Finally there are graph plotting packages. You don't give any explicit instructions like 'draw a line here' with these: instead you provide a set of data figures and give the appropriate instructions to plot a bar chart, a pie chart or whatever.

Graphics packages tend to go in for hardware add-ons to the PCW like mice. This is because the good ol' Qwerty keyboard was, not unreasonably, designed for text input, and isn't ideal for moving lines and pictures around a screen. See the individual packages for what they offer in hardware aids.

Save an image

The beauty of computer design over paper design is that you can save images to disc once they are complete, and then adapt and re-use them later on without starting again from scratch. To store a whole screen of data takes up about 23k of space on the disc. You can combine images with words to make up letterheads, leaflets or brochures producing what can be impressively professional results. You can print out any number of these that you want, although you may find photocopying from a master copy much faster!

There is still the opportunity to make use of someone else's artistic abilities. Many graphics packages have their own libraries of clip art, a series of useful images either digitised pictures or cartoons usually that can be used at the appropriate place.

For those who are more interested in art packages and freehand drawing, as opposed to technical drawing, a digitiser might be a useful addition. This is a clever little piece of equipment that can snatch a frame of a TV picture through your video camera or recorder, and convert it into screen images. The two digitisers reviewed provide facilities to link this digitised picture into various other software packages, so you can put it into your desktop publishing document or doctor it using an art package, to give your favourite newsreader a moustache for instance.

All in all the graphics side of the PCW has now blossomed until there is something to cater for virtually every need. All you need is the imagination and the energy to use them.

To be precise

Although the PCW may not be the first choice for anyone totally committed to computer aided design it can still hold its head up as an inexpensive alternative to some of its more impressive big brothers. While what it can do is impressive it has to be taken into account that it has its limitations.

For instance the precision that can be achieved on the PCW is naturally limited by the definition of the screen and the printer. The screen is made up of more than 184,000 blobs or dots called pixels. If you look closely at text on the screen, you can see that each character is made up of an array of 8 by 8 of these pixels. Pixels can be switched on or off (green or black) so that if they are put together in the right pattern they make up an image in the same way as a TV screen does.

The PCW screen actually has pretty good resolution for a computer (720x354 dots compared to 640x300 on the IBM PC for instance) but you are

still faced with the problem that the smallest amount of detail you can use is a single pixel. Although this looks small, it is perhaps not small enough for all those people who like to work to a fraction of a millimetre.

More of a problem is the printer. Although the resolution of the printer is greater than the screen it is true to say that the faithful old PCW printer was built more for text than graphics. Anyone really taking precision seriously would be advised to invest in a pen plotter or laser printer—providing you have £2000 plus to spare, of course.

The other thing to take into account is that few things to do with graphics are particularly speedy. Building up an image from scratch can be a painstaking process and printing off the results will always take longer than you think. In most cases though, the quality of the result means that the advantages are worth all the hassle.

DIGITISERS

VIDI PCW

£99.95 • Rombo Productions • 0506 39046

DIGITISER

£99.95 • Electric Studio • 0462 675666

Anyone really keen to produce a picture on the green screen as quickly as possible would do well to invest in a digitiser – an amazing box of tricks that links up to your video recorder and snatches pictures for saving or printing.

There are two digitisers on the PCW market at the moment – the Electric Studio Video Digitiser and the recently introduced Vidi Digitiser from Rombo.

Both programs offer similar facilities and cost the same, so perhaps the main reason for choosing one rather than the other is likely to be what you want to do with the pictures.



The Electric Studio attachment obviously runs with other Electric Studio products. For instance you can take a picture of someone on the TV that you don't like and improve them by drawing on a moustache or blacking out their teeth using a light pen or mouse art package. It also allows you to put pictures into the pages in Electric Studio's Newsdesk International pagemaker package, an obvious plus for anyone wanting to use this program to its full potential. On the other hand the Vidi can be used with the new Fleet Street Editor Plus from Mirrorsoft.

You have the facility to make small changes to Vidi

pictures using a cunning zoom facility which allows you to switch individual pixels on or off but it wouldn't be wise to attempt too much with this as it is a painstaking job.

Both packages allow you to play about with the picture, taking parts of it and moving it about and merging different pictures. You can even put in text anywhere in the screen in a variety of type faces and sizes. All these functions are built in to the Vidi package while you have to use some of the company's other packages to achieve the same effect with Electric Studio digitised pictures. Naturally if you already have a light pen or mouse package and font editor you have a greater choice of facilities.

You often face the problem that some pictures look better on the screen than on paper and vice versa. This is often caused by the layers of shading (from two to eight with Electric Studio and two to 16 with the Vidi) with the higher the level of shading the better it looks on paper and the worse on the screen.

This is not always true and it takes some experience before you can feel confident about what will make a good picture when printed out.

The saddest thing is that you can produce images that look stunning on the screen which look less than impressive on paper. Until now you have had little opportunity to take advantage of this but you now can using the Vidi display facility which prints up pictures on the screen, at a defined time gap and in a defined order. This is obviously ideal for presentations where you can build up a powerful series of images with text.

Electric Studio sell a 'continuous smooth-scrolling display' utility of up to six screenfuls of text and graphics in the form of their Rolling Graphic Display at a cost of between £10 and £50.

Mouse power

While Draughtsman and Microdraft can be used solely by keyboard control, they will also work with the Kempson mouse. You may need to get a software upgrade to make the mouse work, so contact the manufacturer for details.

Clip Art

Many graphics programs, especially Desktop Publishing programs, come with a pre-prepared library of pictures. These might include cartoon figures, road signs, and other symbols that are useful but tedious to draw yourself. You can 'clip' these from the library into your picture, hence the term 'clip art'.

	VIDI PCW	DIGITISER	DR GRAPH	POLYPLOT	BAG
Range of features	■■■■■	■■■■■	■■■■■	■■■■■	■■■■■
Ease of use	■■■■■	■■■■■	■■■■■	■■■■■	■■■■■
Performance	■■■■■	■■■■■	■■■■■	■■■■■	■■■■■
Documentation	■■■■■	■■■■■	■■■■■	■■■■■	■■■■■
8000 Plus Value verdict	■■■■■	■■■■■	■■■■■	■■■■■	■■■■■

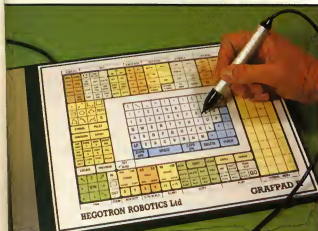
Of mice and menus

Readers of the last few issues of 8000 Plus will be fed up to the back teeth of being told what a mouse is. To recap briefly, a mouse is a special device which trundles a pointer around the screen. You can use it to point to the shape you want to manipulate, and then point to the appropriate choice on a menu to take action. This is much easier than using the keyboard and cursor keys to select things.

There are two main alternatives to a mouse. A light pen is just what it says – a pen, which has a light-sensitive cell for a nib. To tell the program in question that you want to select an

object on the screen, you point the pen at it and press a key to perform the selection. The pen can tell which part of the screen you are pointing to.

The third option, as used in Grafpad, is a tablet. This is a pressure-sensitive pad with an overlay of symbols printed on it. You have a special pen which you move over the tablet, and the position of the pen on the tablet controls a crosshair cursor on the screen. The tablet also has a menu of commands on it, and you choose a command just by pointing the pen to it and clicking a button.



TECHNICAL DRAWING PACKAGES

POWERCAD

£149.50 (with Grafpad II tablet) • Grafsales • 0923 43942

DR DRAW

£49.95 • Digital Research • 0635 35304

MICRODRAFT

£79.95 • Timatic • 0329 236727/239953

DRAUGHTSMAN

£29.95 • EG Computer Graphics • 0572 832940

Most drawing programs can be broken down into straight lines and reasonably regular shapes. They differ in the ways that they achieve an ellipse for instance, but once you have got used to the particular method in use you can usually achieve the exact shape you want.

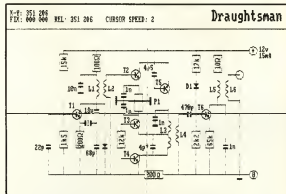
You do need precise control over the positioning of these lines and shapes and hopefully the opportunity to 'undo' whatever you last did (keep on trying until you get it right!). Tie these in with a hatch command (to fill in shapes in a variety of textures) and the ability to place text in any part of the drawing and you have a very workable package.

All these features are incorporated in the average serious design package and more importantly they can be achieved without using expensive peripherals like light pens or mice – although at times you can use a mouse to help speed things up. But by giving more precise control over the movement of the cursor you can usually use the normal cursor keys quite successfully.

The first CAD type package on the market came from the source of all knowledge – Digital Research (the people responsible for CP/M). DR Draw was not specifically written for the PCW, and in its early days gained a reputation as being tricky to get going. This

has been largely sorted out now and DR Draw provides a reasonable general method of technical drawing.

Unlike its competitors, DR Draw uses a grid on the screen for drawing but does not provide a grid reference for the pixel in use as other programs do. One bonus for users with delicate eyes is that in DR Draw the screen works in green on black (like the normal word-processor) and not the black on green so beloved of graphics packages. It may be more difficult to see exactly how your drawing will turn out but your eyes will know the difference after a few hours work.



▲ An example of what can be achieved using Draughtsman.

Grafsales' Powercad/Grafpad is a system that allows for both CAD type drawing and freehand drawing with its special pen. This works with a 'digitising tablet' which takes over the functions of the keyboard. This tablet, which fits into the expansion port of your PCW, has all the functions that you are likely to want including a replica of a QWERTY keyboard so you can even dispense with key presses altogether.

You make your menu choice on the pad by pointing to it with the pen provided and clicking a switch near the nib. The tablet has a list of all the functions you can perform, such as plotting shapes, moving items and saving designs to disc. Also you can just draw freehand with the pen as though on paper, and the trace appears on the screen (if a little jagged). This might take some getting used to but is real fun every time it redraws your picture – you see the image built up pen stroke by pen stroke as you draw it.

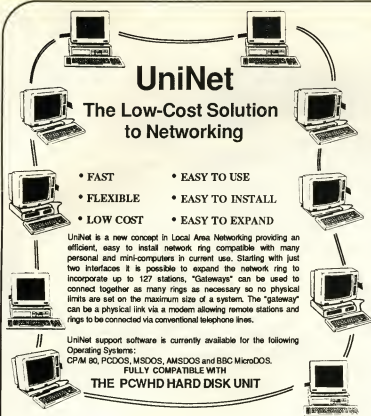
The sophistication of Powercad can be seen in the zoom facility. Most graphics packages allow you to 'zoom' in on a particular area of the screen. All this does usually is blow up the size of the pixels so that you can choose to switch individual pixels on or off – not the speediest of operations. With Grafpad you can zoom in and then draw on the enlarged image normally with the light pen. At £149.50 it is about the most expensive program and therefore seems likely to be used mainly for specialist drawing office applications although it could be used for so much more.

For those really interested in precision, Timatic's Microdraft claims an astonishing accuracy. It achieves accuracy to 0.01mm by in effect zooming in on the particular part of a drawing that you are working on and holding the rest in memory. This is a very sophisticated program and as such is perhaps not the easiest to get to terms with. For serious design applications it will repay your efforts.

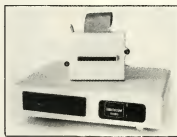
Before the 0.01mm accuracy figure seduces you, bear in mind that to take full advantage of this accuracy you would really have to buy a pen plotter for printing out hard copies. This would set you back ▶

	Electric Studio (light pen/mouse std)	Powercad (tablet standard)	DR Draw (light pen/mouse opt)	Microdraft (mouse optional)	Draughtsman (mouse optional)
Freehand drawing	Y	Y	N	N	N
Undo command	N	Y	Y	Y	Y
Object move	N	Y	Y	Y	N
Area move	Y	Y	Y	Y	N
Symbol storage	N	Y	N	Y	Y
Stretch/distort	Y	Y	Y	N	N
Line thicknesses	var	var	1	1	10
Line styles	1	15	5	5	10
No. of area fill types	56	var	3	var	10
Accuracy	####	####	####	####	####
Range of features	####	####	####	####	####
Ease of use	####	####	####	####	####
Performance	####	####	####	####	####
Documentation	####	####	####	####	####
8000 Plus Value verdict	####	####	####	####	####

var = definable by the user



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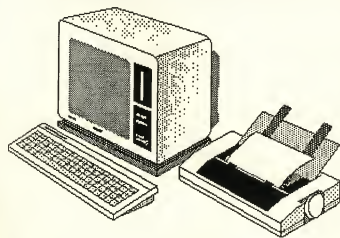
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THE ELECTRIC STUDIO

roughly £1000 but would work with any computer, so should you buy a bigger computer later on you can still use the plotter. For anyone with the need for this type of accuracy it could be worth it.

By way of compromise there is the more recent Draughtsman from E.G. Computer Graphics. This aims to take the middle ground between the 'art' and the CAD programs giving a quicker, simpler way to producing technical drawings.

Within the program you can swap accuracy of cursor position for speed by choosing to move the cursor wires at either one and eight pixels at a time. You can define symbols for regular use (Microdraft too allows you to store picture elements for re-use with its 'Macro' option) and have a wide variety of line types and thicknesses and hatches to make your drawing more interesting.

ART PACKAGES

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At present the only package on the market that gives you a real ability to draw and shade free-hand is from the Electric Studio. There is some talk that a French produced program which works like the IBM PC's 'GEM Paint', using a mouse will soon be launched in this country to compete in this market.

The Electric Studio 'Art' program relies on a light pen or a mouse to operate. Although all the shape drawing facilities of a CAD package are provided, the real appeal is using a light pen or mouse to draw free hand, then overlapping and filling areas with patterns. Here the emphasis is on making the image look good with a choice of pen, paint-brush and spray paint effects. You can paint in different textures or fill in shapes using the 'fill' facility.

One area that the Electric Studio programs are weak on is the problem of scaling the printout correctly. For some perverse reason pictures always seem to look better on screen than they do on paper, but worse than that screen and printer do not match each other for width so that a perfect square on the screen will not necessarily be a perfect square on the printer.

Early versions of Electric Studio suffered from this effect so that you had to make your drawings artificially distorted on the screen as you drew them to make them look right on paper. The newer versions give you the choice of an expanded image that will look right on paper.

As the Art package involves switching pixels on and off using a pen or mouse you face the problems working with the exact pixel that you want. Movement with both pen and mouse are rather imprecise and it can sometimes be quite finicky getting it exactly right.

The advantage is, of course, that when you do correct a part of your drawing it is perfect again. If you draw on paper and get it wrong you will always leave a mark if you rub it out. You have as many chances as

▼ A work of art produced with an Electric Studio Light pen using the various fill textures.



you want to get it right on the green screen and it will always come out just as clean and neat as if you had got it right first time.

Zooming in blows the screen up until you see every pixel plainly and can switch them on and off individually. You are of course so close at this point that you cannot see what the finished picture looks like and have to keep jumping back and forth but it is still an invaluable facility for getting things just right.

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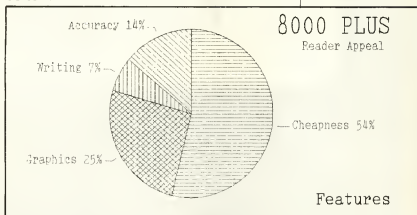
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One simple operation that most people involved in any kind of report preparation will want to do at some time is to draw a graph. Until you have a program to do this you may never have drawn a graph in your life. As soon as you get a program to do this you suddenly start finding a thousand ways of using it.

You can end up drawing a bar graph showing the number of graphs you have drawn over the last six months with a pie chart showing those ones that very really useful, quite useful and a total waste of time. Whether you use graphs to show more clearly how your profits are rising or to hide the fact of how much your losses are rising a simple graph package will be a Godsend.



There are programs specifically created to draw graphs such as the old favourite Digital Research's DR Graph which can produce seven different kinds of graphs and charts. Polyplot, another such program, is part of a suite of wordprocessing programs allows you to create charts and then export them to other Poly-programs, or just print them.

A more recent introduction is Bag which gives you a wide choice of creating graphs or block schematic networks, and even a facility to (as the manual puts it) "draw weird patterns" including ones based on the Mandelbrot algorithm set.

It is also worth remembering that several other programs have inbuilt graph-drawing routines. For instance the Cracker 2 spreadsheet can produce virtually any kind of graph or chart you want. The advantage of this is that you can take any of the figures you are working on in a spreadsheet and immediately produce graphic results. Even programs such as Money Manager Plus may have a limited graph drawing facility that lets you produce graphs to display the figures that you have produced in that particular program.

EX17

HOT

HOTSHOT		addresses	f1	calendar	f2
t 17.29.30		calculator	f3	encode doc	f4
d 15.06.87		diary	f5	decode doc	f6
		notes	f7	word count	f8

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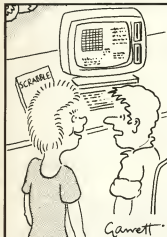
2
1
6
8
alarm ALT f1
timer " f3
set d " f5
set t " f7

save to disc EXTRA f1
load from disc " f3
file size/clear " f5
LocoScript CAN / EXIT

Scrabbled Eggs

Some high scoring words made up from a very bad lot of letters by Rob Ainsley.

Now I enjoy computer fantasy games as much as the next man - especially if the next man is playing Leather Goddesses. But I like to think that, at heart, I am an intellectual, someone who enjoys the thrill of the cerebral challenge of man against machine.



"MAKES YOU FEEL REALLY SMALL - YOU CONVINCE IT 'JREZLIX' IS A PROPER WORD AND IT SARCASMATICALLY SAYS 'THAT WAS A GOOD PLAY'"

Being an ardent fan (favourite, partisan, votary, lover) of the English language (tongue, speech, patter, idiom, dialect, lingo) I was naturally interested in the Scrabble software sold by Leisure Genius. It seemed the obvious choice of game for a dedicated word-processor - and even for the machine too. Improve your word power, I thought! Enhance your vocabulary! Become unbeatable at Trivial Pursuit! Bore the pants off everyone.

I found the prospect of playing against a machine quite exciting. I could be certain that I would not have a sneaky look in the dictionary to see if *ig* was a word while I was on the toilet. It would never complain when I took 20 minutes over a move, it would not finish the last of the lager while I was answering the phone and that it

would not be in the least embarrassed if I happened to put down words which, while being anatomically useful and etymologically well-founded, would not be used in polite company.

The last point caused my excommunication from my girlfriend's nice parents when, with the first play of a game, I triumphantly played all of my tiles to spell a splendid and ancient Anglo-Saxon technical term. They never forgave me for this, particularly as it scored 92 and I went on to win the game.

How 'intelligent' would the machine be? I fancied that, in some small way, I would get a whiff of the heady smell of AI (no, artificial intelligence) and get a feeling of what the guys modelling language into computers must be doing, with their lexes and parsers and dictionary morphological analysers. I couldn't wait to find out.

Let Battle Commence

So, fingers still trembling with excitement, I raced back from the shop up Oxford Street and piled the disc into the machine, eager to get into the thrust and parry of philological swordplay. The first foins of the battle was being able to choose a name for the computer's persona. Decency forbids printing the autonymic I selected but I can tell you it included a four-point letter and a five-point letter and would normally score 13.

So, silly names chosen and letters sorted out, off we went. The computer, playing first, thought for a moment and whacked down ZEINS. Zeins? What? That's not a word, I thought. First problem: you can't challenge the computer. Zeins didn't appear in my Thesaurus, nor could I find it in my English-Urdu dictionary, nor was it lurking near the back of the 1940 Pears' Encyclopaedia, so I had no way of checking up on the damn thing. Reading the small print of the booklet I found out that the

computer draws its lexicon from Webster's dictionary (but... isn't that... American?) and not the good old OED.

However, I soldiered on, despite a raggy collection of letters consisting almost entirely of Ns (Which word in the English language has nine letters, begins with n, ends with n, has an n in the middle, and means 'constipation'? Nnnnnnnnn. I didn't play this. The computer, I decided would not appreciate it. Like the chess-playing machines, it would be modelled fairly closely on Grand Masters and have absolutely no sense of humour.

I managed to put down HAZY, which pretty well summed up how I felt about the game at that point. The computer responded in a flash with EUOI. EUOI? What the hell is an euoi? Not only that, but this play had also created the word YU. YU! Something was clearly wrong here. I was losing 61-18 and hadn't understood a word the computer had played. Had I been given a Mongolian version by mistake? Had the computer been programmed with a Lappish vocabulary? Had the typesetter for Webster's been dyslexic?

Beware... Mutant Lexicon

As the game proceeded even more of this mutant lexicon uncovered itself. By the end of the game the board was resplendent with KA, YITE, BO, AI, AYU, WEMB, KOW, SH, LI and UG. Computer has 436, Rob 227. Computer has won, the screen read rather smugly. After several hours research I managed to trace *aya* (a Japanese sweetfish) *ai* (a three toed sloth) *li* (a Chinese unit of measure equal to a thousandth part of a liang) and *the* (the tree under which Buddha gained enlightenment - possibly by inventing the first deodorant).

As you can see, Scrabble improves your vocabulary, increases your wordpower and enhances your command of the

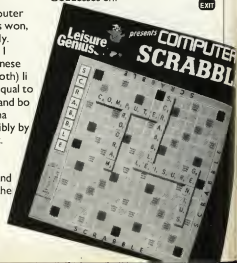
language. "But I was only doing twenty li per hour, officer..." "I'll have *ayu*, *pattie* and *chips*, please..." "All those in favour, say 'three toed sloth'..."

Just as frustrating as this apparently fictional wordlist was the computer's penchant for challenging my perfectly good plays. It queried among others *equips*, *deify*, and *gamble*. All quite legitimate! I quickly discovered the override button - "I challenge GAMBLE", it said, "Are you sure?". Pressing Y was enough to convince it - ha ha! I soon wreaked awful revenge by creating thousand-point strings of totally fabricated words spanning three triple-word scores. "I challenge EOOZYHUGIOFQORK. Are you sure?" it bleated. YYYYYY!! Stuck that up your lexis, your parser, and your dictionary morphological analyser, I thought. Rob 1376 - Computer 121. Rob Has Won.

But the novelty of these exotic words soon wore off - the board ended up looking like a character list from a fantasy adventure - and things soon settled down into a straight battle between man and machine. In fact, the computer is quite beatable even at the top level. Despite its huge vocabulary and like for very tight play it has a poor sense of tactics and has not discovered such elementary techniques as -

- Saving useful letters (eg S) for later
- Looking ahead past the next move
- Fiddling the scores
- Changing its hand from WFJUUOI to SQUEEZE while its opponent is on the toilet.

Perhaps the most interesting feature of the game is the way you can make the computer play not just with you but with itself. I suppose this justifies the name I chose for it back at the beginning. I developed a curious habit of leaving it on through the night playing out deciding games between some of the girls I fancied, fantasising that they were battling it out for me. Who needs Leather Goddesses eh?



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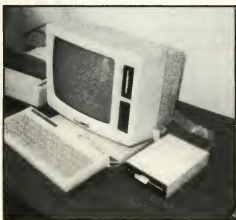
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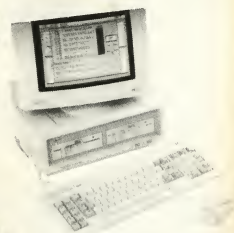
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you can put any accent over any letter (Welsh speakers, there you are!) And there are full modern Greek and Russian character sets *KC*

Quite simply, almost no other word processor at any price can produce the sheer range of characters that LocoScript can. For foreign language or mathematical work, do you have any choice? *BT*

in LocoScript 2, the use of alternative printers is about as simple as it can be *KC*

There's a good chapter on converting yourself from LocoScript 1 to LocoScript 2 *KC*

One of the most exciting features of the new program is its ability to send text direct to any printer attached to the expansion port at the back of the computer *KW*

All PCW owners who type anything more than straight single page letters will benefit from LocoScript 2 *BT*

Costing just £19.95 LocoScript 2 is almost certain to be popular among the majority of PCW owners. *KW*

The good news is that you may never have to use CP/M again and your days of running DISCKIT to format and copy discs are over. You can do all necessary disc housekeeping and preparation entirely from the LocoScript disc management menu in LocoScript 2 *BT*

Is LocoScript 2 better than LocoScript 1.2? The answer is a resounding yes *KH*

General moving about the screen in Edit mode is two to three times faster *KH*

Now that you can get daisywheel print out of LocoScript, there seems hardly any argument not to use it *BT*

the program has been made easier to use, and the new manual is a treasure chest of useful information *KH*

It uses a completely new and far superior character set *KC*

All documents prepared under the original program can be loaded into version 2 *KH*

LocoScript 2 is the new word processor from Locomotive Software for the PCW8256 and 8512.

LocoScript 2 is much faster than the original LocoScript, is easier to use, has more features, better printing and can use a range of high quality printers.

But don't just take it from us - read what the experts in the specialist press say.

At just £19.95 can you afford not to buy LocoScript 2?

The new guide is far more user-friendly and features a comprehensive glossary and checklist *KW*

At £19.95 LocoScript 2 is virtually a giveaway and includes as standard many features that are not found on more expensive packages *KH*

the whole process of editing is speeded up by some much desired short cuts *KC*

LocoScript 2 is Locomotive's answer to criticisms it has received over LocoScript 1, and impressive it is too. *BT*

there are numerous extra goodies *KC*

Full upper and lower case options in Find and Exchange *KC*

moving to a specific page is done in the time it takes to read the file and display it on the screen *KH*

When printing characters with accents, the character is printed at full height with the accent above it, so accented capitals do not need to be squashed in order to accommodate the accent. *KH*

Further information from:



LOCOMOTIVE SYSTEMS

Allen Court,
Dorking,
Surrey RH4 1YL
0306 887902

Extracts from reviews by:

Ben Taylor, 8000 Plus, May 87
Ken Hughes, Computing with the Amstrad PCW, June 87
Kelvin Walker, Putting your Amstrad to Work, June 87
Katherine Cranford, Amstrad Professional Computing, June 87

The LocoMail manual is strange. The first half takes you gently through the simple process of running off a form letter, then just as you think you have really got it sorted out it suddenly hits you with all the weird symbols like #, <, >, and ".

Last month we covered the commands which let you customise the text of a letter depending on who it is to and ended up with a letter something like this:

If this is a friendly letter:

print this friendly text.

If this is not a friendly letter:

print this other text.

Or, to recap on LocoMail's 'simplified' way of doing things:

```
(#Mail)# friendly="y" : <(#Mail)
```

```
friendly text
```

```
(#Mail)>>(<#Mail)
```

```
(#Mail)# friendly="n" : <(#Mail)
```

```
other text
```

```
(<#Mail)>>(<#Mail)
```

There are still a couple of refinements to make life easier. The first thing to note is that split over the third and fourth lines are a pair of adjacent (<#Mail) and (<#Mail) signs. These are redundant, since the one effectively cancels out the other and you would be better to omit them both.

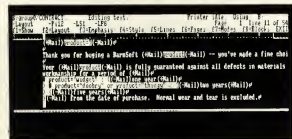
Any character outside a Mail command will always appear on the final printout but those inside the command are not printed. So, once the redundant (<#Mail)/(<#Mail) are eliminated, you have the advantage that the [RETURN] character at the end of line three is now inside a Mail command. This means it does not appear in the final printed letter, which probably suits your page layout better.

Now for the clever stuff. Consider the problem where you are churning out a standard contract of sale for one of your products. Normally you give a five year guarantee, but widgets only get one year, and doobies and things too each.

The way of doing this is shown in the screen shot, and if you can master these commands then you have total control of conditional printing. In particular, there are three new things here.

First remember, as ever, that any [RETURN]s which you use outside the (Mail) symbols (ie. which don't appear in reverse video on the PCW screen) will appear in your final document and may mess up your page layout.

Second, see how the text for the 'doobies' and 'things' has been dealt with in the same go by combining them with an 'OR'. The way this works is fairly obvious if you just read the command as English – "if



Thank you for buying a HardSoft doobry -- you've made a fine choice

Your doobry is fully guaranteed against all defects in materials and workmanship for a period of two years from the date of purchase. Normal wear and tear is excluded.

▲ Try this example out in LocoMail's 'Fill' mode, and set 'product' up to be a 'doobry', 'things', 'widget' or 'wotsit' and see what happens.

making it count

Continuing our series opening up the dreaded 'Advanced Utilities' section of the LocoMail manual

In the first episode of this mini-series we looked at the conditional printing facilities – how to include or omit chunks of text depending on who you are writing to. This month we add a few trills to the process and delve into making LocoMail do your arithmetic for you.

the product is a doobry OR a thingy, print this." You could use 'AND' in the same way – "if the product is a thingy AND there is a maintenance contract, print this."

Finally, and most importantly, the case for the common or garden products comes at the end, without any conditions. LocoMail will print this only if none of the previous conditions apply. So the most general form of conditional printing is

```
(<#Mail) # first condition : <(<#Mail) first text
```

```
(<#Mail) > # second condition : <(<#Mail)
```

```
second text
```

```
(<#Mail) > # third condition : <(<#Mail) third text
```

```
... other conditions
```

```
(<#Mail) > <(<#Mail) text if none of the above conditions apply
```

```
(<#Mail)>>(<#Mail)
```

When is a number not a number?

'Variables' are LocoMail's way of remembering things. You can tell it to store numbers or text in them. This means that by choosing a suitable name you can re-use the same information in several parts of the same document.

However, now that you have read this month's article and discovered the beauty of arithmetic in LocoMail, you ought to think carefully about what goes on behind the scenes. This may save you much heartache when LocoMail comes up with one of its friendly yet concise error messages like 'command type mismatch'.

It may sound like stating the obvious but numbers and letters are not the

same thing. Whereas you can ask LocoMail to work out 2+2, it isn't too happy when asked to work out "peas"x"carrots".

More realistically, you can work out 19.95*1.15 – to add 15% VAT on to a £19.95 bill – but not £19.95*1.15. This is because 19.95 is a number, but the presence of the £ sign means that £19.95 is treated as text.

The moral is that whenever you are setting up a LocoMail data document with lists of number in them make sure that all the numbers are typed as numbers, ie that they don't have any characters other than the digits 0 to 9 and a full stop. Otherwise any arithmetic you do is likely to go wrong.

One, two, three ...

And now for something completely different – getting LocoMail to do your sums for you.

If you write the kind of letters in which you number the paragraphs, perhaps for a contract or other formal document, then you can get into trouble when you start playing around with the conditional printing commands. The problem is that you may have clauses that only apply to certain kinds of client, and therefore you either want to leave out parts of the document or include specialised ones.

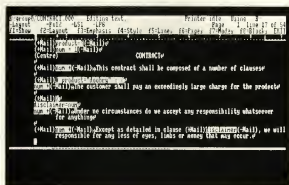
This may present no problem if you can arrange that all these special clauses come after all the standard ones that are always there. However, if you want to include an extra clause for someone after clause 3, not unreasonably numbered 4, then all the subsequent numbers will have to be shunted up. Fortunately LocoMail provides a special way of doing this with its variables.

Where and how much?

LocoMail costs £39.95 and is available from Locomotive Software (0306 887902), from Amsoft (091-567 3395) or from Amstrad dealers like Dixons stores. If you are getting LocoScript 2 make sure that you ask for the version of LocoMail that is compatible.

This and VAT

A quick bit of maths just in case percentages confuse you: 15% of a number is $\frac{1}{10}$ of it. If you add VAT at 15% to a total, you will end up with $\frac{11}{10}$ of the original. So the easiest way to add VAT to multiply it by 1.15. Clever, hey!



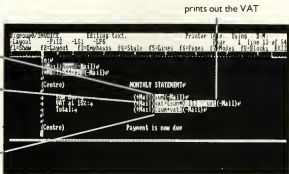
▲ This contract allows you to insert an extra clause if the product is a dooby, while keeping track of the numbers. Try it out in 'Fill' mode setting 'product' to 'dooby', and then something else.

In your standard document you would actually type in 1, 2, 3 and so on beside the appropriate paragraphs. The trick is instead to use a LocoMail variable to hold the number of the current clause. If this variable is called 'num', for argument's sake, then you will recall that the command

`(CMail)num(CMail)` anywhere in a LocoMail document will cause the current value of 'num' to be printed at that point.

Here's the clever part. Whenever you want to put a number down for a clause, use the command

`(CMail)num + (CMail)` which means, "print the number held in 'num' here, and then add one to 'num' so that it is right for the next clause." All will become clear (don't laugh) by looking at the example in the screen shot. Of course you must tell LocoMail what the number of the first clause will be by explicitly setting the variable 'num' up. Most people find that a good point to start is with clause number one.



▲ A LocoMail template to pick up the name, address and sum owed from a data file, calculate the VAT and print a statement out.

`(CMail)num = 1(CMail)`

Fine, you say. But what happens if you want to refer to a specific clause, by saying "as specified in clause 3" or something? If the clauses are being numbered by the automatic method, you won't know when you type up the LocoMail template what number a particular clause will have when it comes to be printed out.

The solution is to use yet another variable. You have to store the number of the clause you wish to refer to in a temporary variable, and then you insert this variable in the text later on when you need to know it. In the example, the line

`(CMail)disclaimer = num(CMail)` saves the current value of the variable 'num' in another variable called 'disclaimer'. Then, when referring back to the disclaimer clause in the text, you could say something like "all eventualities are covered except as detailed in clause `(CMail)disclaimer(CMail)`".

Go forth and multiply

This business of LocoMail being able to add one on to a clause number each time that you print it leads into the larger area of arithmetic.

If your document is an invoice, for instance, then you can get LocoMail to do all the calculations for you. LocoMail can take numbers (or variables that contain numbers) and add, subtract, multiply or divide them. This means that you can automatically add VAT on, work out discounts, add up bills and so on.

Remembering back to your school maths days textbooks were full of questions like 'what is $123 \div 3$ ', 'what is 789×1.15 ', and so on. LocoMail can understand sums written down in this form too. Computers use special symbols for division and multiplication: because there is no $\div$ key, the slash symbol, /, is used for division instead, and to avoid confusion between lower case x and the standard multiplication sign an asterisk, *, is used for multiplication.

To tell LocoMail that there is a calculation coming up, you must enclose the commands in a pair of square brackets, and of course the inevitable `(CMail)(CMail)` commands. So a line in a document reading

`(CMail)[69.95*1.15](CMail)` would insert 80.44 at that point in the final printed document. This isn't very useful in itself, since you might just as well work out what 69.95×1.15 is, and type 80.44 into the document straight away. The power of LocoMail's arithmetic is that you can work on the variables that you have set up in your mailmerge data.

Rather than printing the result out straight away, you could store it for use in a calculation later on. To do this you need to pick a variable name (good old 'fred', for argument's sake in this example) to hold the result, and use the command

`(CMail)[fred=69.95*1.15](CMail)`

One important difference between working something out and storing it in a variable is that when you store it the value is not printed out – you have to do it explicitly in a separate command. You can now use 'fred' in a later calculation like

`(CMail)[fred+10](CMail)`

Suppose that you are doing an invoice run, and your data records consist of customers' names, addresses and amounts owed. The example shown in the screen shots then prints out an invoice showing the VAT exclusive amount, the VAT, and the total. Notice how a new variable called 'vat' is set up to hold the amount of VAT, and that this is used again when working out the total amount.

● Next month, in the final exciting instalment of the LocoMail story, we'll go through a complete example application showing LocoMail organising an order book.

Versatility at your fingertips



Kempston Desktop System £119.95

Available now, the definite desktop publishing package for the Amstrad PCW 8256/8512, consisting of the Kempston Mouse and Interface (both styled and colour matched to complement the PCW), together with Fleet Street Editor Plus by Mirrorsoft.

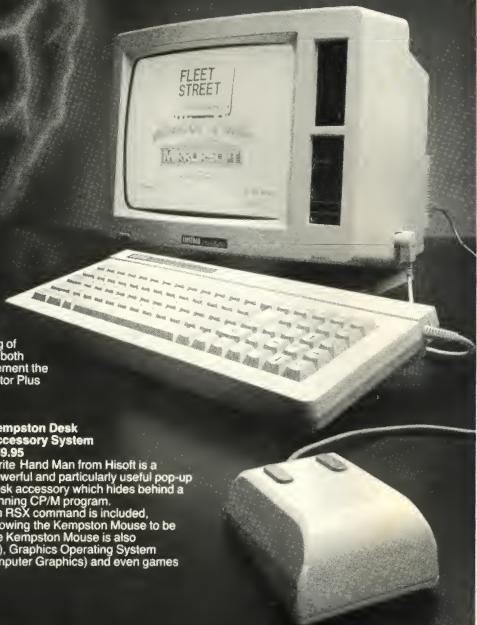


Kempston Desk Accessory System £89.95

Write Hand Man from Hisoft is a powerful and particularly useful pop-up desk accessory which hides behind a running CP/M program.

An RSX command is included, allowing the Kempston Mouse to be

used with many CP/M programs. The Kempston Mouse is also compatible with Micro Draft (Timatic), Graphics Operating System (Mirrorsoft), Draughtsman (E.G. Computer Graphics) and even games like Starglider (Rainbird).



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COUNTRY LIFE

Farmer Mark Sykes gathers the harvest from his PCW and its crop of software

Farmers have it very easy. Their working days are spent ripping out ancient hedgerows and spraying poisons on rare fauna and flora. The other six months are passed in Bermuda worrying about where the next subsidy is coming from.

Or so everyone seems to believe. Here in the Yorkshire Dales it is different. The climate is damp (70 inches average rainfall) and we can only grow grass to feed our sheep and cattle.

I deplore slavery so I choose not to milk cows, which is a twice a day job, 365 days of the year. Previously I have kept beef cattle but rising mountains of sirloin in the EEC stores and falling prices at the auctions have made burning pound notes an easier way of losing money.

That leaves the sheep and as you can see, my PCW 8256 comes in very handy for keeping the ewes amused in the sheephouse as they wait to lamb. When I can prise them away from the Hitchhiker's Guide, I am allowed to use the Amstrad myself. Mine is only a small operation so my book-keeping does not need to be sophisticated – any accountant who deals with farmers will tell you that he expects to have to produce a Balance Sheet from a pile of filthy scraps of paper and a cheque book with none of the stubs filled in.

I used to be a solicitor before turning to agriculture 14 years ago, so I try to do a tidy job. Before I got the 8256 I used to keep the records in an ordinary analysis book.

This system can be very readily transferred to a spreadsheet, in fact it already is one. It was somewhat at random that I chose SuperCalc2 which has turned out to

be perfectly satisfactory – more powerful than I need really.

Simple? Very. Cheap? Yes. Time saving? Weeeeell, yes and no. I am not a speedy typist so it takes longer to enter the details on the keyboard than to write them in a book, though organisation of the order of the columns and judicious use of the windows removes the need to scroll wearily through 23 columns for every entry.

The main advantage is the saving of both time and temper in having the calculations done for me. On my own I cannot make a column of figures add up to the same total twice either with or without a calculator. GIGO (Garbage In, Garbage Out – a morsel of old computer wisdom) problems apart, balances are achieved very easily. Having a model Profit & Loss Account and Balance Sheet set up with the formulas already in place saves a lot of irritating tab work with a typewriter and minor adjustments can be made to the finished product without having to throw away pages of laborious work.

On the actual workings of SuperCalc2, having cracked the problem of how to get it to run from the M drive, I now transfer it there at the start of each day's operation and keep the files on a separate disc. Much too late I have discovered that the SuperCalc2 disc has a program for setting it up in the M drive called SUPERC.COM. I haven't seen this mentioned elsewhere, even in the manual, and I wish I had known earlier. Do a DIR [FULL] on yours and see what you find. Entering data is painfully slow on 'Auto', so I work with it on 'Manual' and force the recalculation with the '!' command when I need to.

Adults only

The 8256 is my first 'grown-up' computing venture though the children have a CPC 464. I did experiment with a spreadsheet on it but was disappointed by the cassette drive. The endless delays in getting the DMP 2000 printer finally made us decide to go for the 8256, but I was unprepared for the complexities of CP/M which I was thrown into by wanting to get SuperCalc2 into memory.

My difficulty was that I had not grasped the distinction between 'system files' and other files. I knew from the manual that the SC2.COM file was essential but just could not get it into M. In fact I even began to wonder whether it was on the disc at all, since doing a mere "DIR" does not show system files, as any child no doubt knows (but I did not). Even when Amstrad sent me the right PIP procedure (ie. M:=ASC2.[R]) I managed to mistake the vital [R] – the bit that gets the system files included – for an instruction to hit the [RETURN] key! You may laugh, but only the intervention of a unfriendly nephew saved me from complete CP/M psychosis. (Thanks again, Chris!)

But the hours I spent thumbing my way through the Amstrad manual weren't wasted. I got superficially acquainted with CP/M and this has helped to wean me away from the nursery of LogoScript, so I was ready to be convinced by the Protext salesmen who were demonstrating their wares at the Hammersmith Amstrad Show in January.

I was hanging round their stall hoping that they could solve my other problems. Anyone with clerical qualifications tends to get roped into every local project there is, ending up as Clerk to the Parish Council, Secretary to the Village Hall, minute taker for the Sports Committee etc etc. This is interesting but time consuming. A mailmerge program seemed to be just the thing to automate the circulation of minutes and notices of meetings.

So I had a good browse. If you've never been to a show, make sure you go sometime. The number of

The fifth column

Very few of the farm transactions are cash items so the routine book-keeping is just a matter of analysing the monthly bank statements into the spreadsheet. For ease of handling I have set up one sheet for the outgoing and another for receipts, otherwise the printout spreads across three sheets of paper. I need 19 columns to analyse outgoing but less than half that number for receipts. So a garage bill for example will be split into the columns for "Car", "Landrover/Tractor", "VAT" and if the children have been putting their sweets on my bill, "Personal".

The only "tweak" I have added to this straight transfer of the analysis book is an extra column D next to the

"Amount" column which contains a formula totalling the figures in the remainder of the row to its right. This should equal the "Amount" figure and acts as a check that the breakdown of the payment has been correctly calculated. When all the cheques and credits have been entered, I total the "Amount" column, replicate that cell to total the analysis columns, check that my column D figure is right and I should have a breakdown of all the month's transactions. I incorporate these into running totals and at the year end transfer them to a model Profit and Loss Account which is set up on a separate spreadsheet together with a model Balance Sheet.



exhibits is bewildering and at first you tend to hover on the edge of the crowd trying not to catch anyone's eye. But the other visitors aren't all computer experts - they ask just the same silly questions that you want to. Get the reps to demonstrate all those lovely programs that you've seen advertised - it's what they're there for.

Taking the plunge

I went round several times before making up my mind. LocoMail was tempting because of the LocoScript connection. NewWord is fast and powerful and its WordStar connections make it an obvious choice for office use, but it seemed slightly inaccessible to a simple country boy. In the end Protexx seemed to have it all - speed, mailmerge, spelling checker and it uses most of the existing PCW special keys.

So I bought Protexx on the spot and I am glad I did. I recommend particularly the two-file editing, the inbuilt, if basic, calculator, and the facilities for swapping two adjacent characters or changing case in one operation. It's surprisingly easy to pick up the commands and the speed after LocoScript takes your breath away.

I like the command lines stored in the text too. They greatly simplify layouts, headers and footers, margins and so on - I was always struggling to get through those endless LocoScript menus. You can put comments and reminders in the text that will not get printed, and even leave rude messages for yourself.

The mail-merge does take a bit of learning but repays perseverance. Running off address labels still gives me a glow of pleasure and I feel like a boy with a new bike every time I see my letters to the parish councillors roll out from one template, all correctly addressed and with each councillor called by his christian name.

The first version I used had a problem locking up whenever I typed '>' on a blank line. I also think it would have been fairer if Arnor, who must have known, had

told the punters who bought version 1.98 at the Show that the printing department was as full of bugs as an undipped sheep. Version 2.01 which they exchanged it for seems all right but an apology and a refund of the return postage would have been nice.

What next? Well, my sheep are pedigree Swaledales and I have an index card on each ewe with details of her parentage, breeding record, retained ewe lambs and foibles (eg. "Always has lambs backwards") - a clear application for a database. I had a look at some of the simpler card indexes at the Show, and most would have done the job. Having splashed out on Protexx I felt too guilty to buy anything else. Now I'm dithering about whether to invest in a more complicated one and to pretend that its really for my eldest daughter who is about to start GCSE computer studies. dBase II looks very tempting at less than £90!

I've had the Amstrad about a year. It hasn't exactly transformed my life, but I'd be lost without it; I certainly hadn't expected it to be fun as well as useful. I've acquired a new and lasting source of interest and I hope Mr. Sugar gets as much pleasure from his profits as I do from his product.

▲ Farmers are easily confused by adverts for RAM upgrades

END

Are you a case?

Has your PCW revolutionised your life? Traumatized it? 'Case in Point' is a regular feature of 8000 Plus, and we are always looking for readers with interesting experiences to relate. If you use your PCW for something more than just running LocoScript, why not share your thoughts with a waiting world?

Try to keep things light but specific, with a fair smattering of hard facts

about the packages you use. If you've had a bad time with some software, don't be afraid to sound off - you could be saving other readers weeks of agony.

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BEAT THE BOOKIES

Using computers as an aid to narrowing gambling odds isn't a new idea, but it's only recently caught up with the PCW. Trevor Haydon offers some tips.

COURSEWINNER

£18.00 • Selec Software • 061-428 7425

Most winners of horse races are animals that have the soundest form credentials. That may seem a rather obvious thing to say – until you have to decide precisely what that elusive quality actually is. Many a fortune has been lost trying to decide!

The idea behind this kind of program is to reduce that judgement factor to a minimum. By simply feeding in the required information on previous form the programs will take care of the comparative characteristics and cough up a numerical rating for each animal, with the likely winner clearly shown. That's the theory, anyway. Let's take a look at the practice.

Working the magic

If you want to approach the matter a little more seriously than the annual couple of quid in the Grand National, it's as well to consider precisely how a professional might use this kind of aid.

Firstly, it is very useful in determining which horses are unlikely to win. Those with ratings well outside the top three rarely produce winners – at least they haven't in the time I've been using the program. In a small field (say a maximum of eight runners) this can often reduce the real chances to no more than two or three animals. Statistically, this factor alone puts the odds very much in your favour.

Coupled with the fact that 50% of winners come from the first two in the betting forecast, you have only to wait

until such time that the program's top ratings match the two shortest priced horses in the forecast before deciding where your money is going.

Which one of the top two or three do you go for, you ask? Well, that's sometimes quite literally the \$64,000 question, but since you have to invest in one of the daily racing papers for the kind of information needed by these programs, you could do worse than simply go for the better horse in the paper's own form ratings.

Odds won't tip in your favour with all races, of course, but nobody says you have to invest each time. Wait until such ratings do occur. As they say in the Unit Trust ads "profits can go down as well as up".

Coursewinner works from a database containing details of horses, jockeys and trainers. Since this can never be complete, it shows how you can update and change it according to your own needs – very useful if you choose to specialise in certain kinds of races. It will also calculate the true odds on each animal, and then automatically display a potential individual profit factor. This is an invaluable aid if you are to be sure of being on to a Good Thing in terms of value. Winners are not difficult to find, after all – but overall profits are. This single factor goes a long way towards avoiding taking unfair prices on hot favourites, the bane of the average punter's life.

For each entered form factor (which extends to the horses' past three outings) it is also possible to isolate all other factors using a 'bias' key, so determining where – if any – the top rated may be at its weakest. All in all, it is a professional approach to the problem.

COURSEWINNER

THE PUNTERS COMPUTER PROGRAM



selec
SOFTWARE

"Yes," I hear you say, "but does it work?" Well, if you mean does it pick winners the answer is an unreserved "yes." But if you are asking does it pick all – or even a majority – of the winners the answer must be an equally unreserved "not on your life, mate!"

What the program can do is to narrow the odds in your favour rather than in the bookie's, and there lies its chief value to the serious punter. In practical terms, it's just as important to know which horse won't win the race as the one which will – and there's a lot more to choose from too! The running of the program plus a little basic know-how of the sport is the answer here, as with most things. The final selection should always be your own rather than the computer's, though the program will happily oblige in this respect if you insist – sometimes very appreciably.

Coursewinner offers a sophisticated approach to form evaluation, it is also endlessly adaptable to your own needs. Not infrequently it pinpointed selections significantly ahead in the ratings yet well down the betting forecast, and so at excellent odds in terms of getting value for money.

PLUSES

- ☒ Works from a database of past form which you can add to as the season progresses
- ☒ Comes with preset jockey/trainer data
- ☒ Copes with up to 16 horses per race

MINUSES

- ☒ Don't get fooled into thinking wins are certainties

RANGE OF FEATURES ☒ ☒ ☒ ☒
EASE OF USE ☒ ☒ ☒ ☒

PERFORMANCE ☒ ☒ ☒ ☒
DOCUMENTATION ☒ ☒ ☒ ☒

8000 PLUS VALUE VERDICT ☒ ☒ ☒ ☒

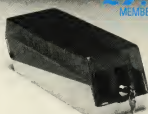
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INSTANT LETTERS

Ever had that sneaking feeling that you were not getting the most from LocoScript? Ever woken up in a cold sweat because you don't understand how to get LocoMail to work properly? Or have found your brain seizing up as you try to think up snappy replies to a mountain of mail? If so you may find the answer to your problems in one of a series of products that have been introduced recently to help people get down to producing letters quickly and simply without the painful experience of having to read the manual.

One of the advantages (or disadvantages) of LocoScript is that it can produce a large number of clever effects. It is possible to be using the program quite successfully for some time without realising what it actually can do. The situation with LocoMail is even more striking. It offers what amounts to a complete programming language able to achieve sophisticated results. You can easily get LocoMail running as a basic mail merge program but could you set it up as a complex credit control program?

The three packages reviewed here are discs of ready-made documents for use with LocoScript or LocoMail. HPA's Credit Controller and Thurston Brown's TempDisc each provide templates you would have trouble designing yourself – either complex mail-merge setups or esoteric arrangements of headers and footers on multi-page documents.

The third program – Eclipse Software's Instant Business Letters – aims to help busy writers by providing a mammoth 102 business letters which it is hoped will cover every conceivable eventuality that you might face.

The main consideration with all these programs must be how much it is worth to save yourself reading (and understanding) a manual or agonising over the phrasing of a sentence.

PLUSES

- ☒ Makes use of LocoMail in a way that you probably never thought of using it.
- ☒ Makes good use of the LocoMail system without having to plough through the manual.

MINUSES

- ☐ If you haven't already got LocoMail or don't need LocoMail it is expensive.

RANGE OF FEATURES
EASE OF USE



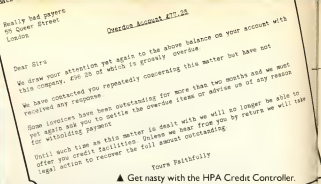
PERFORMANCE
DOCUMENTATION



8000 PLUS VALUE VERDICT ■■■■□□

TempDisc £11.95 (£12.95 B drive version) • Thurston Brown • 0395 68385

If you haven't had the time to explore LocoScript's hidden depths – or you actually find computer manuals difficult to understand (*heaven forbid* – Ed), you might be interested in investing in Thurston Brown's TempDisc, a disc loosely described as Template Data Disc for LocoScript. The reality is something that falls between a collection of templates and a tutorial for advanced LocoScriptian.



Credit Controller £24.95 • HPA Systems • 08697 508

Those of you who have been following our articles on the mysteries of LocoMail will have now realised that it is more than just a mail-merge program. It is a sophisticated tool with a programming language of its own.

With cash flow so important to most companies it is often vital to have a good credit control system. Many companies may have invested in LocoMail to send out circular letters without realising that it was possible to produce something clever like a credit control system with it.

If you have a copy of LocoMail you can of course set up this sort of system yourself. All you need is a reasonable grasp of LocoMail's programming capabilities, a clear idea of what you want from a credit control system and a bit of time. Or you might be quite happy to pay £24.95 to buy HPA's expertise in the matter.

Credit Controller is set up with relative ease – listing all your customers (with address and telephone numbers) and putting each in one of five status classifications from close personal friend to that b***** that you've had trouble with before. You also set a credit limit and note the number of letters you have sent before without response.

These details are needed for the program's 'conditional printing' facilities. So if a status two customer (a very valued customer you can't afford to offend) owes you a certain sum of money out pops a gentle, polite reminder. If a status five customer owes the same amount the program produces a real cracker of a nasty letter threatening legal action.

This is achieved by the fact that the program can decide to include different phrases in the letter depending on the details fed in. It can even pick up some inconsistencies in the figures (like the outstanding amount you are claiming is greater than the total amount due). It will ask if it should proceed and print out a Check Account Report of all queried accounts.

All you need to do is update the figures on a regular basis and run the system. The program produces a Chase Report – a list of overdue debtors (with telephone numbers) to follow up and a Stop List with a list of customers to whom no further supplies should be made. In fact there's everything you need to keep a sensible track of your debtors. And when you aren't running Credit Controller you still have a program to do all your mail merge duties, which is probably why you bought LocoMail in the first place.

The list of contents sounds impressive. As well as the letter templates with all the header and footer suggestions you could want the disc tackles invoicing, genealogy, envelope and label printing, creating lists, shipping documentation for exporters, setting up league tables (for 12 or 16 teams) committee documentation and invitations to parties. There is even an all-embracing apology for your behaviour at someone else's party.

These make clever use of all of LocoScript's features. Various PHRASES.STD are available depending on which section you are using so you can (PASTE) in suitable phrases in an instant. Label and envelope template are set

up with details such as the correct pitches and page lengths already set.

Where these templates come in to their own is in all the applications involving lists. You can line up all your details quickly and easily without having to learn the difference between a left, right or centre tab. Although the examples given might not fit your needs entirely you have everything set up to adapt to your own needs.

But it is on the "graphics" side of LocoScript that Thurston Brown have put most of their effort. By ingenious use of all the vague characters you get in LocoScript when you press [ALT] or [EXTRA], the designers have created a vast selection of borders and designs which you can use to brighten up your documents.

Whether you really think that it does brighten up your documents to use a border made up of Inca hieroglyphics and scientific symbols must be a matter of taste but they certainly do look effective when used in the invitation templates provided. Going even further, TempDisc provides weird and wonderful screen layouts using the Reverse Video codes. Unfortunately LocoScript can't print in reverse video, so it is a bit of a waste. Still, Thurston Brown offer a £10 prize for the best screen design sent to them.



▲ Just some of the fancy borders provided on TempDisc.

PLUSES

- Using the disc tells you a lot about the intricacies of LocoScript.
- You can achieve impressive results without opening the LocoScript manual.

MINUSES

- You could do everything on this disc for free by reading the PCW manual
- You really have to like the idea of fancy borders to get full value from this disc.

RANGE OF FEATURES ■■■■
EASE OF USE ■■■■

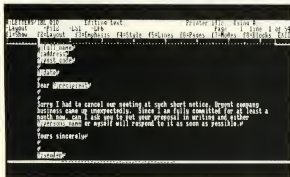
PERFORMANCE ■■■■
DOCUMENTATION ■■■■

8000 PLUS VALUE VERDICT ■■■■

INSTANT BUSINESS LETTERS £14.95 (£19.95 Locomail version) ● Eclipse Software ● 0922 692258

Have you ever tried to be bright and original while trying to reply to 400 rather boring letters? No. Not many people have. And that is the theory behind the Instant Business Letters (IBL) disc from Eclipse Software.

The reasoning is that most letters fall into one of a number of categories that can be replied to by a suitable standard letter. As long as you have enough standard letters you should be able to find the right one – or at least modify one that is nearly right – to suit every requirement and save yourself a lot of brain-thrashing and heart-searching.

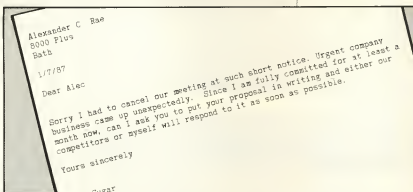


▲ The 'Cancellation of meeting (fob-off)' template from Instant Business Letters. Watch out in case you get one yourself.

Not only does it help with the production of the sort of circulars you would normally produce on a mail merge program it also eases the writing of one-off letters. IBL is available in forms for LocoScript or Locomail. The two are much the same, but with Locomail you can use the 'Fill' command to run the letters off rather than having to edit them.

The other advantage is that anyone who feels a little less than confident about producing snappy business letters should welcome the suggested letters that are aimed at covering virtually every eventuality you are likely to face.

The problem with any list is that you always find a number of letters for eventualities that won't affect you



(like the letter that politely declines to speak at the Chamber of Commerce lunch because you are rushing off with your "technical bod" to sort out a major export deal) and there is always one letter that you need that is not there (like one asking why you have never been asked to speak at the Chamber of Commerce lunch).

But given that to be all things to all men is impossible the list of 102 letters should cover most of the common problems you come across in the hurly burly of every day life. For instance you have a suggested letter for cancelling a meeting and another one named "Cancellation of a meeting (fob-off)".

The letters themselves are written in a fresh, economic and un pompous style that should not cause offence although there are one or two little spelling mistakes which suggest that it would still be worth sticking your letters through LocoSpell if you want to look really efficient.

▲ How the fob-off looks on paper.

PLUSES

- Saves you creating 102 standard letters of your own.
- Provides a reasonable style for business letters.

MINUSES

- There is a chance that you could find only a small number of templates really useful.
- If you have difficulty writing business letters you may not need a word-processor.

RANGE OF FEATURES ■■■■
EASE OF USE ■■■■

PERFORMANCE ■■■■
DOCUMENTATION ■■■■

8000 PLUS VALUE VERDICT ■■■■

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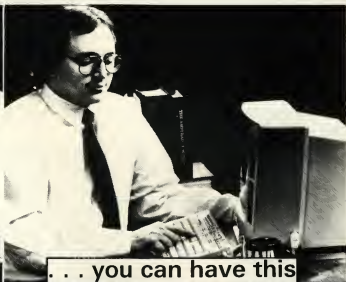
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(Send for list of our software)

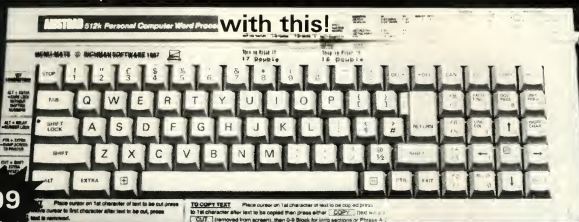
LocoScript user. . .



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COMPETITION

Fancy a break from all your serious word-processing or number crunching? Well, you could buy Design Design's new Distractions disc – a compilation of three diverting and distracting arcade type games for your PCW (reviewed in this month's issue), or you could enter our competition and win a day out on the town with the one you love. No – not your PCW, it has to be a human being.

We have designed a devilish yet simple competition to celebrate the launch of Design Design's new disc. The first prize is an all-expenses paid day out for two in either London or Edinburgh. Two tickets to an event of your choice will be provided, although we can't avoid the normal laws of supply and demand – if you want to see Phantom of the Opera you could be in for a long wait. Travel there and back is included, as are meals.

The first correct entry drawn from the hat (well it's a big cardboard box actually) will enjoy this pleasant distraction. Five runners-up will win a 'Magic', the compulsive new puzzle from Mr. Rubik. If you thought his cube was difficult, wait until you see Magic. It's just the thing to play with while you wait for LocoScript to finish scrolling through its doings.



DRIVEN TO DISTRACTIONS

Win a lavish day out for two, or one of five infuriating runners-up prizes – all courtesy of Design Design

All you have to do is ...

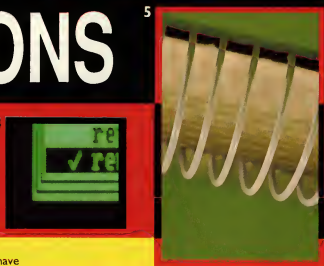
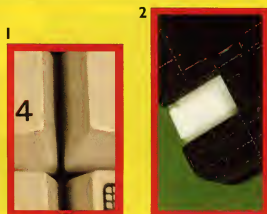
The crack 8000 Plus competition creation team have struggled long and hard to come up with another simple but ingenious brain-teaser suitable for the high intellectual standard of our average reader.

Just glance at these six pictures and then write down what they are. What could be simpler? To make it childishly easy we have chosen items that any 8000 Plus reader would use every day – a PCW and its related accessories.

We just want a list with a short, simple explanation of what or where each picture is against the relevant number. An entry that says 'part of a PCW' is unlikely to win, but then again you've got to keep it short enough to be written on the back of a post card or a sealed envelope.

Since the occasional faux pas brightens up our day no end, we might well award one of the runners-up prizes to the single most inappropriate answer to the quiz. Just as a little distraction for ourselves.

When you have completed your definitive list, rush it off on a postcard (or the back an envelope) marked 'Distractions Competition' to 8000 Plus, 4 Queen Street, Bath BA1 1EJ.



Rules

1. Entries must arrive no later than the July 24th and the winners will be announced in the September issue of 8000 Plus.
2. The judges decision is final and no correspondence will be entered into.
4. We still haven't thought up a good rule 3 but we're working on it.

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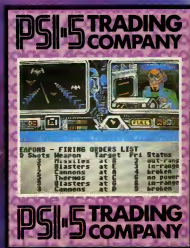
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ACCOUNT FOR YOURSELF

Part two of Ian Berry's teach-yourself-accounts trilogy discovers the beauty of paying on credit

Last month's article revealed that basic book-keeping is just keeping a diary, and it left off asking, "Will we ever get round to using the computer?" This month you can finally blow the dust off your PCW, plug in and start to streamline your accounts with the help of a spreadsheet.

Last month's cashbook accounting system is not a very good information base since all the payments are jumbled up together, as are the receipts, and you need to be able to answer questions like "How much did I spend on goods for resale in this week?" or "How much did it cost to run the van in that week?" To do this you would need to sit down and analyse the cash book. If it were already analysed these answers would be readily available. The payments side of the cash book would have to look like the example shown.

The first three columns are exactly the same as the old 'diary' system (date, narrative, payment), but then the amount is repeated in the appropriate 'analysis' column

date	Narrative	Total	Purch	Van	Wages	Rent
Mon	Goods	60	60			
	Rent	20				20
Tue	Petrol	15		15		
	Bags	7	7			
	Goods	110	110			
Wed	Repairs	25		25		
Thu	Wages	55			55	
		292	267	40	55	20

so that by totalling any column to find out how much you have spent in that area.

This is where the computer starts to be helpful. Now you are into analysis you need an analysis program. These are called 'spreadsheets', because they are like a large sheet of paper spread out on a desk. There are umpteen spreadsheet programs available, and it would be unfair to single out any particular one because most of them can do everything you need.

You need to design your layout with columns for all the headings you will use. However, it would be impossible to have a column for every heading you would ever need, since there will always be unexpected categories cropping up. It is useful to reserve the last two columns of a page under the heading 'others'. One of these holds a subsidiary narrative, where you write a description of the transaction, and the other holds the amount. Then as you go along you can enter your payments, keep the accumulating spreadsheet in memory, and when you need to know how much you spent on the van one week, you use the program to add up the relevant column for you.

You can double-check your figures by comparing the 'total' column with the sum of all the individual analysis columns. If they match, you can be sure that there are no errors, and you can just read the values you want off the columns. Rather than keep the whole year on one sheet, you would total up and print reports out weekly or monthly, keep the printouts for future reference, and start the next period's sheet with the totals from the last one. This avoids your spreadsheet becoming unmanageably large.

As an example, look at the spreadsheet shown for a mythical fruit and veg business. This shows the analysed receipts on the left and the analysed payments on the right. For detailed transactions you may be better off keeping receipt and payment details in separate files, otherwise things can get confusing.

The takings from the shop and the stall have been shown separately, but cannot be totalled separately without some difficulty. In this case it might be advisable to increase the number of columns on the receipts side so that the four columns shown here are duplicated, with one set used for the shop and the other for the stall.

Having got a total for the week, you can now think about how you are going to use it. You could either just use it as the first line of the next week's sheet, or you could start another spreadsheet file of weekly totals, or you could carry it forward to the end of the month and then have a sheet of monthly totals. In short, do whatever you think will give you the most useful information.

'On account' trading

When we set out on the diary system which grew into a spreadsheet, I explained that it would work for any cash business. What if you buy and sell goods on credit? As far as the cash side of the business goes these systems will still work, but you need something more to keep tabs on what you are owed and what you owe other people.

Think back to the cash book diary from last month. What you need to do now is to adjust your "Duplicate Receipt Book" and "File of Paid Bills" boxes to allow for unpaid as well as paid items. This means that you need an extra file for each one to hold the unpaid items, so your system will look like the five-box diagram shown.

Now that you have sorted out the configuration, what do you do differently? Apart from looking after the two extra files – nothing.

Is this still a 'perfectly good' record of your business? Well, not quite, because you don't know how much you have spent in the period, but only what you have paid for. The difference is, of course, the unpaid items. Provided

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WIZARD GAMES

This month's new games delve into fantasy and fable – noted warlock Tony Flanagan investigates.

LORD OF THE RINGS
£19.95 • Melbourne House • 01-377 8411

Hobbits, as we all know, are furry little creatures whose favourite pastime it seems is going off on long journeys which last at least 3,000 pages. If only Tolkien had been better at précis...

Now the computer game is not quite that long, covering as it does only the first part of Tolkien's trilogy – The Fellowship of the Ring. Having said that, it will probably take you as long to complete the game as it would to read all three volumes three times over!

For anybody who's been in an Outer Mongolian monastery for the last 50 years, here's a little background. Lord of the Rings is set in Middle Earth, a strange place inhabited by all manner of weird and wonderful creatures, indeed, not that much different from the House of Commons.

Balrogs, dwarves, elves, orcs, trolls, wargs and wolves, you name it, they're all there. The orcs are particularly charming. It seems they can't say even hello without slicing someone's head off.

The scenario, at its most simple, is this. Sauron, the baddie, has developed an unhealthy fetish for rings, particularly magical ones. Now it just so happens that



Frodo, the goodie, has inherited one from his eccentric uncle Bilbo (a name to be read very carefully if you're dyslexic). Slightly peeved by this, Sauron has despatched his Black Riders to look of little Frodo's head and take the ring. Consequently, Frodo must leg it as quick as he can to Rivendell where Elrond, the Elf-King, will advise him what to do.

You assume the role of Frodo or one of his three friends, Sam, Merry, and Pippin, who accompany him on his dangerous quest. However, it is possible to control all four characters and to switch from one to the other by simply using one of three simple commands.

Ironically, all four hobbits are fairly human. They get tired, hungry and usually die when a sword or some other such weapon pierces their vitals. This means that you have to allow your characters plenty of food and rest, particularly if they've recently been engaged in anything strenuous.

The game comes in two parts and there is also a beginner's game for those unfamiliar with adventuring. Although it is advisable that you complete part one before adventuring on to part two this is not compulsory.

Knowing Tolkien's work might prove useful but is not essential and might even be misleading. There are no pretty graphics screens, but this compelling adventure game triumphs in its own right and will delight and baffle in equal quantities.

Run, replete with protective suit and jetpack, you find yourself in a maze with only an hour in which to find seven flasks. These are not ordinary flasks, of course, but contain toxic chemicals.

Out to stop you are a host of malicious mutants from giant jellyfish to noisome gnashers. Contact with any of these saps your energy, which must be continually replenished by picking up the various objects that are scattered about the maze.

This game is simple but very playable. Though the graphics are large and for the most part quite detailed, the flip screen is very irritating. Moreover, the title seems a bit of a misnomer – shouldn't we see Ronald Biggs or some such personage trotting across the green screen?

The second game, 21/2AD, is a little dry. A computer has assumed a mind of its own, a scenario that anyone with a PCW can relate to. Accompanied by your faithful robo-hound Paddy, it's your task to collect ten code pieces (no, not codpieces), scattered throughout the computer complex.

PLUSSES

- ☒ A comprehensive cocktail of myth, legend and saga
- ☒ Control of various characters
- ☒ A convincing fictional world

MINUSES

- ☒ Some of the location descriptions are too brief
- ☒ I'm developing an inordinate interest in rings

ATMOSPHERE
INTERACTION



CHALLENGE
VALUE VERDICT



DISTRACTIONS

£19.95 • Design Design • 2 South Block, Riverside Way, The Maltings, Sawbridgeworth, Herts CM21 9PG

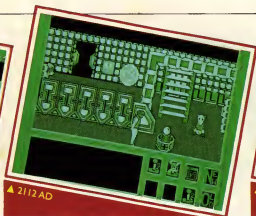
DISTRACTIONS

Design Design like Duran Duran have a slight problem. It seems two is always better than one. I said two is always better than one. Now they've gone one step further by putting three games onto one disk, which should add up to good value for money.

Mutants, mazes and mushrooms just about sum up the first game in this rather incongruous trilogy. In *On the*



▲ On The Run



▲ 2112 AD



▲ NEXOR

Along the way you must avoid a number of mechanical monsters, who quite rightly assume that computers are superior to humans. Gather the code pieces together, insert them in the right order and the game's won – simple!

Initially, this game is quite difficult to get into. First, there seem an infinite number of icons (OK twenty or so) and second, the windows which display them are not exactly huge. Once you get the hang of the game, however, it turns out to be quite intriguing.

The final game is a 3D arcade adventure entitled *NEXOR*, which stands for Nemesis (sic) EXperimental and Operational Research, whatever that means. The idea of the game is to stop the Nemesis device and its blueprints being captured by the Andromedans (they sound quite friendly don't they?).

Finding yourself in a multi-level complex, surrounded by buildings that look not unlike New York sky-scrapers, you must scamper about as fast as you can. It wouldn't be

so bad perhaps if the character you control didn't jump as if he were suffering from terminal diarrhoea. Dilly-dally too long and the Andromedans will beat you to it, seize the parts of the *NEXOR* device and the valuable documents that accompany them.

Distractions didn't exactly drive me to distraction but all three games were enjoyable in their own way and for the money you can't really complain.

PLUSES

- ▣ Instantly playable and good basic fun (*On the Run*)
- ▣ Interesting variation of the arcade adventure genre (*2112AD*)
- ▣ Lots of different rooms to explore with specific puzzles (*NEXOR*)

GRAPHICS ADDICTIVENESS

■■■■
■■■■

MINUSES

- ▣ The scenarios in all three games fail to convince
- ▣ Graphically the backdrop to *2112AD* and *NEXOR* are too uniform
- ▣ *2112AD* is very confusing initially

LASTING APPEAL VALUE VERDICT

■■■■
■■■■

SORCERER

£24.95 • Infocom/Activision • 01-431 1101/2992

Now that all that election nonsense is over, it's good to get down to something serious. You can have too much of a good thing, can't you... In this game, you enter a world of sorcery and enchantment, of magic spells and curious potions, of grues, brogmoids and other creatures with peculiar names.

Having successfully defeated the evil warlock Krill, you've gained entry to the renowned Circle of Enchanters, a sort of medieval equivalent of the Magic Circle. Now this would be fine if everything was all right, which it isn't, if you see what I mean.

Belboz, a kind of Paul Daniels figure I suppose, has been acting very mysteriously: taking himself seriously, losing his temper and making peculiar noises long after he should have been tucked away in bed. And now, to cap it all, the most powerful enchanter of them all has done a bunk.

As his friend and prodigy, it's your job to track him down using a combination of brain-power, perseverance and all the thaumaturgical powers at your disposal. The last come in the form of spells, some of which you are given at the start of the game, others which are acquired as you progress.

All of them have bizarre names. The 'izyuk' spell enables you to fly like a bird, the 'rezrov' spell opens locked or enchanted objects, the 'gaspar' spell means that you can resurrect yourself. (This one, my sources reveal, even Paul Daniels has trouble with). Most spells need to be memorised before they can be used, though they are not always successful.

Quite understandably, all this necromancing will make you hungry and thirsty. It is important, therefore, that water and food are consumed at frequent intervals,

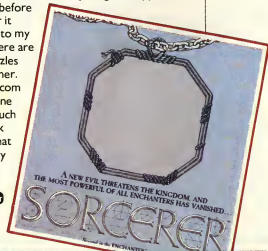
otherwise you'll simply expire. Rest is also vital but be careful not to fall asleep as you might find yourself locked in the Chamber of Living Death – eternally.

Clues come in various forms – notes on doors, magazines, scrolls, elusive nymphs whispering sweet nothings in your ear – and there's even an encyclopedia for reference. Belboz's parrot is also extremely useful, though don't expect any intelligent interchange.

In the world of the *Sorcerer* anything can happen. A potion can arrive before the day you order it (I must show this to my postman!), and there are problems and puzzles around every corner.

As with all Infocom adventures, this one contains a nice touch of tongue in cheek which lightens what can often be a very dull day.

Thaumaturgically sound!



PLUSES

- ▣ Excellent descriptions
- ▣ Packed with objects to examine and utilise
- ▣ Easy to get into and from then on, compulsively playable

ATMOSPHERE INTERACTION

■■■■
■■■■

MINUSES

- ▣ I'm stuck in the Chamber of Living Death – still, it beats working for a living
- ▣ In reality, the spells don't work – I still look like a watry toad!

CHALLENGE VALUE VERDICT

■■■■
■■■■

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Anybody who has used LocoScript already knows most of the basics of CP/M. You know how to use DISCKIT to copy discs, and therefore you know how to start up CP/M. If you haven't already done so, use DISCKIT now to copy the CP/M master startup disc onto a new blank work disc and use that from now on.

The PCW is a computer which runs programs. Each program needs data to work on—in the case of LocoScript the data is the letters and documents that you type in. Data is stored on discs, and once you've understood just how this is done then you understand CP/M.

For any software that you buy the manual will go into detail on exactly how to run the program but you can work a lot out for yourself without even reading the instructions.

Don't read the manual

The first thing to do when you unpack a program is, of course, to use DISCKIT to copy the master disc on to a new blank disc. This means that should the disc become corrupted later on, as sometimes happens, you have a copy to go back to.

The next thing is to see what files are on the disc. LocoScript lists them out for you automatically on the Disc Management Screen but in CP/M you have to ask. The list of files on a disc is called the 'directory' of the disc, and since the basic CP/M commands tend to be three letters long the way to get a directory is to type

```
DIR [RETURN]
```

In CP/M, the various LocoScript function keys such as [CUT], [PASTE], [F1] to [F8] and so on are not used at all. Instead you just type commands at the keyboard and press [RETURN] to make CP/M execute them. There are no menus.

Assuming that you still have your CP/M startup disc in the drive, when you give the DIR command you should see the directory listed out much as in the screen shot shown. CP/M files follow the same naming conventions as LocoScript documents, ie they have, at most, an eight

letter name, then a dot, then a three letter extension. Names never have spaces in them in spite of what you might think from looking at the DIR listing.

You can see from the directory that there are certain very common extensions such as '.COM'. You can tell a

lot from the extension that a file has since names follow certain conventions (see the 'What's in a name' box). In particular, any file which ends in .COM is a program which can be run. To run it, just type its name and press [RETURN].

For example, if you have bought the game Hitchhiker's Guide to the Galaxy, when you do a DIR on the disc you will see a file called HITCHHIK.COM. This means that to run the game, you type

```
HITCHHIK [RETURN]
```

Similarly, when you run DISCKIT by typing DISCKIT [RETURN], you are telling CP/M to go away, find the file DISCKIT.COM and run the program in it. If you ever get stuck and can't work out how to use a program disk, list out its directory and try running all the .COM files until something sensible happens.

The other kind of file which you can tell ought to do things are files that end '.SUB'. These are called 'submit' files, because to run them you must type 'SUBMIT filename'. One such file on the CP/M disc is called

```
RPED.SUB — try typing
SUBMIT RPED [RETURN]
```

SQUARE ONE

An idiot's guide to CP/M — learn the bare necessities of life without worrying about being too clever

It is quite possible to drive a car without having a clue what is going on inside it, but if you do pause to think about what the gears are doing you will probably be a better driver. Similarly, it is quite possible to run programs from CP/M without any idea of what you are doing. But if you do understand a little then you will have a good idea of what to do — especially when, inevitably, things start to go wrong.

```

0 A>dir
A: 114CPM3.DMS : PROFILE.DMG : RPED.BAS : RPED.SUB : BASIC.COM
A: DIR.COM : DISCKIT.COM : DD.COM : ERASE.COM : LANGUAGE.COM
A: PALETTE.COM : PAPER.COM : PIP.COM : RENAME.COM : SET.COM
A: SETPAABO.COM : SETDIR.COM : SETKEYS.COM : SETLIST.COM : SETSID.COM
A: SHON.COM : SUBMIT.COM : TYPE.COM : KEYS.COM : KEYS.COM
0 B>

```

This file is called BASIC.COM — no spaces in the name despite appearances.

▲ The directory listing of the CP/M master disc

and see what happens. You will end up in the BASIC text editor, so press [EXIT] to get out again back to the A> prompt.

Slipping a disc

One important concept to get to grips with is that of the 'current logged drive'. You know that there are three disc drive lettered A, B and M. The CP/M prompt tells you which of those drives is your current drive — 'A>' means it is drive A. If you type

```
B: [RETURN]
```

the prompt will change to B>, which means that CP/M expects all your files to be on drive B. If you want to access a file not on the current drive you must stick its drive letter before the filename, with a colon, so that the PCW knows where to find it. So, if you were logged on to drive B, and you wanted to run the program contained in HITCHHIK.COM on drive A, you would type

```
A:HITCHHIK [RETURN]
```

Almost every command that you give CP/M involves running a .COM file, therefore it is a fairly safe bet that if ▶

Pirates ahoy

Making backup copies of programs with DISCKIT is common practice, but some programs (particularly games) are copy-protected. This is because the manufacturers are afraid that if you can copy the program, it will get pirated and they will lose sales. In such cases, you have to use the master disc to run the program, and if it becomes corrupted the manufacturer will replace it for you.

What's in a name?

The extension after the dot in a filename tells you what the file is used for. The most common extensions are these:

COM 'command' files, i.e. programs. Run these just by typing their name at the CP/M prompt
SUB 'submit' files, which you run by typing SUBMIT filename

BAS BASIC program files, which you run by typing BASIC filename
TXT text files. You can inspect these by the command TYPE filename
 The following types are only used as parts of other programs, and you don't need to know about them directly:
EMS 'Early Morning Start' files—needed on any disc which starts up CP/M or LocoScript from cold
OVR 'overlay' files—parts of programs
SYS 'system' files
 Anything else is either a special file for a specific program, or may be a text file. Try typing TYPE filename and see what happens—If it is text, you can read it, if it is a program, you will see hieroglyphics on the screen.



One of the most infuriating things about CP/M is that when something goes wrong, it generates the most obscure error messages imaginable. Here are a few you might encounter:

When trying to erase a file: 'ERASE.COM needed' probably means your disc is write protected. Flick the write tab on the disc and try again.

When trying to run a program called FRED: 'FRED?' means CP/M can't find the file FRED.COM. Either you have mistyped the name, or you have the wrong disc in. Try again.

When using PIP: 'DISK WRITE NO DATA BLOCK' means the disc is full. Use a new disc, or erase a file from the old one and try again. 'INVALID FORMAT' means you are trying to copy a file on to itself or something silly. You have probably forgotten to include a disc drive letter in one of the filenames. Retype it and try again.

What can the matter be?

Transient success

Commands which need you to have their COM file on the disc—like PIP—are known as 'transient commands'. However, there are five commands which are built in to CP/M, and you can use them no matter what is on the disc in the drive at any time. These five are DIR, TYPE, REN (Rename), ERA and USER. Jargon collectors call these 'CCP commands'.

you are ever told to do something like "type EXPLODE [RETURN]", then it is assumed that you have made sure your currently logged disc holds a file called EXPLODE.COM. If this isn't so, you will see

EXPLODE?
 as CP/M's reply. This means it can't find EXPLODE.COM, so put the right disc in and try again.

World domination

There are only a couple more things to do, and then you've got complete mastery over the PCW. Once you've understood how to find what files are stored on a disc, the next step is to be able to alter them.

Being able to delete files is pretty useful, since this frees space on the disc for new files. Since CP/M is resolutely American (it whistles the Stars and Stripes each night when it brushes its teeth), it doesn't delete

files but erases them instead. Therefore the command to get rid of a file is 'ERA filename'. If you have your CP/M work disc in, try typing

```
ERA ED.COM [RETURN]
```

If you do a DIR, you will see that the file ED.COM has gone. ED is an unimportant program that you won't need to use anyway.

The most important thing to learn is how to copy files from one disc to another, which is done using the command PIP. The basic form of the PIP command is 'PIP name of new file = name of old file'. This makes the PCW copy the old file into the new one. If you include the disc letter before the file, it will read it to or from that disc, otherwise it assumes you mean the current disc. If you don't specify a new file name, PIP assumes that the copy is to have the same name as the original file. A few examples might clarify things:

```
PIP NEWFRED.XYZ=FRED.ABC
```

copies the file FRED.ABC on the current disc into a new file NEWFRED.XYZ on the current disc

```
PIP B:=FRED.ABC
```

copies FRED.ABC from the current disc into a new file called FRED.ABC on drive B. If the current drive is drive B, you will get an error.

```
PIP M:NEWFRED.XYZ=B:FRED.ABC
```

copies FRED.ABC from drive B into NEWFRED.XYZ on drive M.

For most purposes, you can think of 'PIP' as meaning 'copy'. Just make sure you get the order right: new file on the left, old file on the right. If you want to move a file rather than copy it, then copy it and ERAse it afterwards.

All these three examples assume that you have PIP.COM on your current logged drive. If not, the PCW will say 'PIP?' at you. PIP is itself only a file, so the way to copy PIP from drive A to drive B is to have a disc with PIP.COM in drive A and to say

```
PIP B:=PIP.COM
```

Although 8256's only have one disc drive, CP/M thinks there is an A and a B drive. The B drive is just a different disc in the A drive, and CP/M will beep and prompt you to switch discs when it needs to read from the A or B drives. The best way to copy a file from one disc to another on an 8256 is to copy from drive A to drive B and let CP/M prompt you for when to switch discs. On an 8512, life is easier since you have both A and B discs in their respective drives at the same time.



▲ The SHOW command tells you how much space is on your discs

One final sophistication that you might find useful as you become a CP/M expert is the command to find out how much space there is on your disc. Make sure you have copied the file SHOW.COM from the CP/M startup disc on to your current disc, and then type

```
SHOW [RETURN]
```

CP/M will now tell you how much space is left on each of the discs in your PCW.

You now know all you need to get from a blank screen to running any CP/M program and controlling your data discs. If you get really stuck, you could try reading the PCW manual—but then again, there are much more enjoyable ways of raising your blood pressure. Have fun.

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All screen work is done graphically — and hence we offer unique panel, box, and ruled line options. Choose the line spacing at pixel resolution — you will be amazed how much clearer 9-pixel lines are than the usual 8-pixels. (Study the picture.) And all this faster than CP/M normally lets you paint the screen! PCW printer functions, under menu control, are provided.

Customer Details and Invoices

00: Display Options

British United Freight
453 Western Avenue
Glenview
GL5 5DA

Tel: 0452 6
Contact: Mike M
Ref: 30P

Screen display
Align text
Expand text
Design to fit
Keep page
Print page
Go to record number
Print
Print single record
Enter record
Insert new record
Show re-sequenced
Delete record
Go to search
Exit to main menu

Invoice	Tax point	Amount	Date paid	Comments
12944	26 Aug 87	£225.00	02 Oct 87	
12959	25 Aug 87	£250.00	02 Oct 87	
12969	01 Oct 87	£265.00	---	
12951	21 Oct 87	£125.00	---	
12952	02 Nov 87	£1,004.58	---	
12958	18 Nov 87	£280.65	---	
12790	18 Nov 87	£296.00	---	
12792	11 Nov 87	£25.00	---	
12839	04 Dec 87	£887.55	04 Dec 87	Cash with order
Totals:		£3,253.38		

Date of invoice: 11 Nov 87

Printed: 11 Nov 87 10:15:25

Record: 00000005

Selected: 000000

Row: 1

Format: 1

Keyed files are maintained automatically in key sequence, with never any need to sort. You can have unkeyed files too, where records can be inserted at any point in the file.

Any file can make RELATIONAL references to up to EIGHT read-only keyed files, the linkage being effected purely by the use of matching file and data names.

You can import/merge ASCII files (e.g. from MASTERFILE III), or export any data (e.g. to a word-processor), and merge files. For keyed files this is a true merge, not just an append operation. By virtue of export and re-import you can make a copy of a file in another key sequence. New data fields can be added at any time.

File searches combine flexibility with speed. (MASTERFILE 8000 usually waits for you, not the other way around.) You can even assign subsets of a file into one or more of seven pigeon-holes for subsequent reference or further manipulation.

Megaglonerate Ltd			
Sales Contact: Martin Redburn		Regd Office: 100-101, London Road, Chislehurst, Essex SS2 5DC	
Telephone: 0205 654321			
References: NCL			
Date of last order: 14 Sep 86			
Value to date: £31,455.00			
Ref	Author	Material	Price ex VAT
CM01	System	12000	£110
CM02	System	12000	£110
CM03	System	12000	£110
CM04	System	12000	£110
CM05	System	12000	£110
CM06	System	12000	£110
CM07	System	12000	£110
CM08	System	12000	£110
CM09	System	12000	£110
CM10	System	12000	£110
CM11	System	12000	£110
CM12	System	12000	£110
CM13	System	12000	£110
CM14	System	12000	£110
CM15	System	12000	£110
CM16	System	12000	£110
CM17	System	12000	£110
CM18	System	12000	£110
CM19	System	12000	£110
CM20	System	12000	£110
CM21	System	12000	£110
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CM97	System	12000	£110
CM98	System	12000	£110
CM99	System	12000	£110
CM00	System	12000	£110

FIELD-TO-FIELD CALCULATION is available, using any mixture of terms and arithmetic operators + - * / () .

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ABLE LABELS

Tony Kendle looks at two packages to assist the country's junk mail mongers

Label printing is an essential occupation for those companies who make a living by besieging the public with mail, junk or otherwise. If you fancy contributing to this national boom industry there are many programs available that are capable of doing the job with more or less ease, ranging from word processors to databases, but you can also turn to specialist label printers.

Most word processors have a 'mail merge' facility whereby each letter you send can be customised to be addressed to a list of people on a data file. The degree of customisation can be extremely flexible, allowing you to write an apparently personal letter to many people all automatically.

However, for straight bulk mailings of printed matter, all you need is the address labels. What is required is a simple program to store the relevant details, and be able to print out all the labels for a specific mailing. Therefore you need some way of tagging each address with a code telling you what that person is interested in, then you can say 'print out all labels for people with product 42', for example.

This kind of application falls between the two areas of mail merging and databases. Whereas the mail merger can't do the selection of addresses that you need, a full-blown database may be overcomplicated and not well suited to the actual printout task. What you need is a hybrid of the two. Label printers fill just this gap. The idea is to be able to quickly make up an address list, and print it out, for example with different travelling instructions inserted depending on where the person lives, or different lines of text depending on whether they have a phone number or not. On their own, label printers are only useful for sending 'uncustomised' letters such as general advertising bums.

The fundamental difference between label printers and mail mergers or databases is that whilst specialist label

printers make it much easier to perfect the layout of the printed data, especially when you have stationery with several columns of labels across the sheet, they are rarely flexible enough to use the information for anything else.

There are two main labelling programs on the market. *Easy Labeller* from MASS is an established package that has been around for some time now, and the imaginatively titled *Label Printer* from Microdraw is a new challenger.

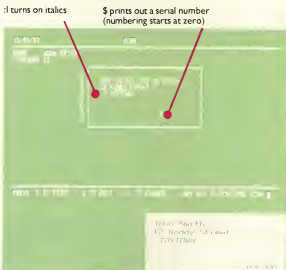
EASY LABELLER

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Easy Labeller is the more expensive of the two programs reviewed and has obviously had more effort put into the features it provides, if not the presentation.

On loading, the user is presented with a fairly unfriendly sign on message and a blank line awaiting the instructions you wish to give. This unfriendliness is really only superficial as by typing 'HELP' at any time a list of the available commands and brief functions is shown, and can even be printed out. You are reminded of this option any time you seem to be struggling.

The bad news is that the program uses up an entire blank formatted disk for data storage, fitting about 1000 labels per disc. At the end of the working session the computer *must* be told to close down the data files or they will be corrupted. This is always a dangerous system, as you live in constant dread of a power failure.



▲ The *Easy Labeller* screen while editing a label, and the result that emerges

The greatest shock – reach for the migraine tablets – comes when you realise that there is no 'data import' option. All those hundreds of names you have already entered into your database are worth absolutely zip. You have to enter them all over again.

Each label you add to the data file is given a category number from 1 to 99 which is used to group data into segments which can then be selected and printed exclusively, eg. all customers that have bought a Sierra, an Escort or an Orion and so on. You can target mail shots to any one particular group this way.

Pressing [EXIT] jumps you to a small image of the chosen label into which you can enter the text using a reasonable selection of word processor-like commands. An extremely irritating feature is that as soon as each label is completed you are returned back to the main menu which again slows the entry process down, or at least feels like it does.

Big Brother

A cloud on the horizon of anyone who wants to store information on a computer is the poorly thought out Data Protection Act. If you just wish to store a list of names and addresses you will probably be okay. As soon as you try to categorise these in any way you will have to register.

The size of it

The majority of labels come in a fairly standard size, 1.5" height between the top of one to the top of the next, and with eight labels down fitting on a sheet of 12" paper. All programs with a label printing capacity are likely to come predefined to handle this type.

It is usual to see sheets of one or two labels wide which is the maximum that can fit on most 80 column printers such as the PCW's. The technical term used to describe how many there are sideways is 'the number across the web'. Wide carriage printers can handle three, four or five across the

web. Output is often faster with these, as line feeds tend to slow printers down, but the calculations required by the software to get all of the data aligned and in the correct order is more complex.

Other sizes of label are of course available, and you can even buy 'continuous envelopes' to avoid labels altogether. The more your stationery needs deviate from the norm, the more expensive it will become and the more difficult it will be to buy off-the-shelf software that can cope with it.

There are certain special characters that do useful things on labels. When printing, if the label has a '?' character, this will be replaced by the current date. '\$' will also be replaced by an incremental serial number which can be set before printing. Any text on a line after the '!' character will act as a comment and will not be printed. A "" will be replaced by the 'message of the day', such as "Happy Christmas to all our Readers", which can be defined by the user at print time. A wide choice of print styles can be mixed in the label.

Once defined, there is a 'Find' command that will search for a given text string anywhere in a label and prepare the first match it finds for editing or printing. The printing facilities are very good - any lines of the label can be omitted and the remainder printed in any order. Any number of copies of an individual label can be printed by specifying its name, or a range of labels can be printed by specifying the category they belong to and the start name.

The label types and position can be redefined by

altering the settings for margin, the sideways gap between labels in the web, the number in the web, and the gap between labels down the sheet. With the test mode, you can demonstrate your chosen settings on ordinary paper, so you can experiment without wasting valuable labels.

PLUSES

- Generally very flexible
- Useful options like printing current date out
- Good search facilities
- Good range of printing options to fit most stationery

MINUSES

- Data needs an entire disc to itself
- No data import facility
- Data entry is slowed by returning to the main menu between labels

RANGE OF FEATURES
EASE OF USE



PERFORMANCE
DOCUMENTATION



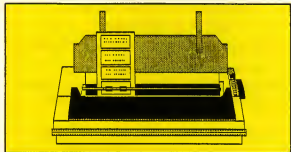
8000 PLUS VALUE VERDICT

LABEL PRINTER

£25.00 • Microdraw • 0622 685481

Label Printer looks very different. It is controlled by a series of menus which makes it much easier to fly when just starting out but may prove irritating in the long run. However in practice the two have a tremendous amount of similarities.

The most unwelcome similarity is that Label Printer again needs to dedicate a disc to store its own specially formatted data file. No data import or output options exist. The options available for editing your labels, and inserting fancy features, are less comprehensive than with Easy Labeller. You can mix type styles, add serial numbers and serial letters, delete left and right and clear all text, insert characters, and switch upper and lower case.



Newly typed labels can be directly printed out by specifying the number of copies you want, and the label size. Up to two labels across the web are allowed. When taking data from a stored file you can optionally specify the data drive, and also can inspect each label in turn and choose whether or not to skip it.

When adding a label to a stored file there is a greater restriction over the label size, and no underlining is allowed. However, you can store three reminder lines of information about each label that is not printed, but does get included in any text search, and can put them into named categories, a better system than that of Easy Labeller.

All stored labels can be listed, selected by its number in the file, selected by a search of the data or a selected by category. You do have the option for changing the label size at printing so that the restrictions on label size seem only to be related to the way the data is stored on disc.

Finally as soon as you leave Label Printer, it calls up Diskit, if you have it on your working disc, which is a very nice touch to encourage people to keep making backups of their data.

Verdict

In truth there is relatively little to choose between the two programs, and there is no suggestion that either of them is a 'bad buy'.

They are both fairly priced, as there is no escaping that Easy Labeller by MASS is the more powerful program of the two. However for most people, Label Printer will do a more than adequate job, and seems to be the most fluent to use. It is probable that this impression is due entirely to the more cumbersome data entry procedure of Easy Labeller and that, once the name and address file has been largely finalised, it will be the better tool. Easy Labeller is the best choice if you are using unusual stationery.

One of the greatest differences between them is the style of presentation. Both companies claim that theirs is more sensible, and at the end of the day you might as well go for the one that suits your preference.

Ultimately however they share a deep flaw, namely the problem of data file handling. They need to have data merge, data export and in particular data import options to be really useful, and certainly these will have to be added before they stand a chance of selling to anyone who has already invested time and effort in typing names and addresses into an existing system. The first company to solve this deserves to clean up.

EXIT

PLUSES

- Has all the basic features
- Menus make it simple to get going
- Speedy data entry
- Can store comments with each label's data

MINUSES

- Data needs an entire disc to itself
- No data import facility

RANGE OF FEATURES
EASE OF USE



PERFORMANCE
DOCUMENTATION



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Amstrad PC1512 Double Drive Colour	838.35	735.00 (A)
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4 only 20MHz Amstrad Hard Disc and Network System Inc.	2500.00	2164.00 (A)
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Ribbon Printer - PCW	79.95	67.00 (C)
ESLP Electric Stylus Light Pen - PCW	68.94	60.00 (C)
CP8256 Amstrad R5232/Parallel Interface - PCW	99.95	65.00 (C)
Gemini Intercom Interface for 2nd 3 1/2 5 1/4 5 1/4 drive	143.75	128.00 (C)
SD3 Pace 2nd 5 1/4 disc drive DDD5 40/80T for intercom	631.35	500.00 (A)
ATT 35CPS Dots/line printer inc. R5232 IF & Newword W/P		

SOFTWARE

Amsoft Supercalc 2 - 6128/PCW	49.99	38.00 (C)
Amsoft Protext inc: Spell checker & mailmerge - 6128/PCW	79.95	57.00 (C)
Ashtron Tate dBaseII - PCW	119.00	87.00 (D)
Amson point of sale package - PCW8512 (will link to sage)	194.35	150.00 (D)
Compact Cambase - PCW	49.95	35.00 (C)
Caxton Cariboo - 6128/PCW	59.99	46.50 (D)
Caxton Condor I - 6128 Twin/PCW	99.99	77.00 (D)
Compact Nucleus - PCW	99.99	68.00 (D)
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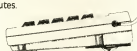
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LANGFORD'S PRINTOUT

A page foolishly handed
over to SF author
DAVID LANGFORD who
just happens to own an
AMSTRAD



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Suppose some advanced hacker trained a high-tech electromagnetic snooper on your PCW and stole the text of your precious best-seller as fast as you could type it in. Suppose—switching to something that's happened to a friend of mine—your disks were nicked before you could print out your epoch-making novel *Son of War and Peace Has Risen From The Grave*. What defence do you have against anyone who, so to speak, takes the words right out of your mouth and flogs them illicitly?

Few writers seem terribly clear about copyright law, especially when computers are involved. It takes the *Writers & Artists' Yearbook* most of a page just to list amendments to the 1956 Copyright Act (star-studded successor to the Act of 1911). I've met people who produce private newsletters or science fiction fanzines, and reluctantly send six copies of each issue to the British Museum Library since "otherwise it isn't copyright." Happily, they've got it wrong.

The 'copyright libraries' are a red herring. They've been granted the right to demand freebie copies of everything commercially published in Britain, but failure to cough up doesn't affect copyright—only your bank account, as the fines for non-compliance mount up. Amateur publishers have a loophole: the Act says the gratis

copies must be in the same condition as those offered for sale. If you don't sell your publications commercially, you can thumb your nose at the libraries.

Copyright in printed stuff is fairly straightforward. You have the full protection of British and European copyright law the moment the story (or drawing, or tune, or limerick) is on paper. The work needn't be published, or even shown to anybody else. If some low hack from the computer press sneaks a photocopy of your manuscript and snivellingly publishes it under his or her own name, the prison gates will loom—if, of course, you can prove it was originally your nicked epic. And as far as I can make out, US copyright protection is thrown in the moment you scrawl "(c) David Langford 1987" or its equivalent on the print-out.

"But," I hear you wail, "I haven't printed out my novel!" Of course you haven't. No sense in wasting all that paper until you've got the hideous sexual perversion scenes polished just right, and checked the spelling of 'fornication'. Don't worry: any possible legal gap seems to have been plugged by the Copyright (Computer Software) Amendment Act of 1985. This essentially lays down that copyright in software and thus other things normally kept on disk is identical to copyright in books. Once your golden prose or program is keyed

into the machine, it's theoretically protected against pirate publishers... though not against your failing to save the file before switching off, so watch it.

British copyright covers arrangements of words (or notes, or lines), but not ideas. If tomorrow some other hack publishes an article strangely like this one, my chances of persuading a judge to don the black cap would depend on how many actual phrases could be traced back to this column. Merely pinching the general idea isn't enough.

Getting the hump

I was glad of this when years ago I wrote occasional pieces for *Computer and Video Games*, at the urgent request of my bank

JUST LIKE A BOOK

My favourite software copyright licence comes from Borland International of Turbo Pascal fame. They don't muck around with copy protection (I refuse to buy protected software), and merely ask that you treat the package "like a book". A book can only be read by one person at a time. So long as a Borland product is only run on one computer at any one time, you can move it between machines, make backups to your heart's content, even loan or sell the program to someone else... all with Borland's blessing. This might sound too trusting: but Borland stuff is so good that serious users who 'test drive' it are irresistibly tempted to get their own official copy with the fat and friendly manual. Being easy-going can be good business practice, it seems.

manager. My brief was to demonstrate how science-fictional ideas could inspire simple programs. Inspiration soon ran low, since I don't remember any SF novel which could credibly have been a source for the program called *Attack of the Galactic Camels*...

This was written to annoy my wife, who at the time was keen on camels and had a collection of stuffed ones, fortunately not life size. It was the work of mere days to set another little laser-armed phosphor blip jerking around the screen, zapping rogue camels at the player's command. (I was not as sensible then as I am now.) You could have knocked me over with a three-inch disk when the anguished letter of complaint arrived.

It wasn't the RSPCA who objected, but a computer outfit I'd never heard of, called Llamasoft. They were irate about David Langford swiping the "camels idea", which was their very own, their own idea which was theirs. Their game was called (with rather squalid sensationalism, I thought) *Attack of the Mutant Camels*. A friend cheered me up by libellously implying that said firm might be touchy about plagiarism because of this very program. In it, giant camels vaguely resembling landwalkers from *The Empire Strikes Back* lurched about the screen, as opposed to the giant landwalkers vaguely resembling camels which starred in the official *Empire Strikes Back* video game...

Armed with the Copyright Act and the *Oxford English Dictionary*, I could only hit back with the irrefutable fact that the first British emergence of the 'camels idea' would appear to be some time before either of our programs, in the Anglo-Saxon *Lindisfarne Gospels* circa 950AD.

After which, my next stunningly trivial C&VG program being all about falling down holes, I stayed up biting my nails in fear of a midnight knock on the door from the estate of Lewis Carroll.

All the above (c) D. Langford, 1987. Fantastically lucrative offers for film, TV, mineral or fishing rights should enclose stamped addressed envelope. Any attempt to show this column to someone who hasn't paid for a copy of *8000 Plus* will cause enormous thugs to break down the door and wave industrial-strength magnets over all your disks. Have a nice day.

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Every programming language has its own way of doing things—called its 'environment', and Logo's is especially rich and varied. The most immediate, and best known, aspect of the Logo environment is its Turtle Graphics.

The 'turtle' is actually an arrow shape which lives on the screen of the PCW. To draw lines in Logo you give the turtle commands like 'go forward 100 steps'. This special turtle grips a pen as it moves, and so draws a line behind it as it moves.

To get going with the turtle, type
`cs [RETURN]`

This is the 'Clear Screen' command, and you will see the screen go blank and the 'turtle' appear in the middle. Logo is now ready to accept commands, which in Logo jargon are known as 'primitives'.

With a series of simple primitives, the Turtle can be made to go, not only anywhere on the screen, but also anywhere within a vast field off-screen and unseen, either trailing a line behind it or not. `cs`, incidentally, normally leaves ten lines at the foot of the screen to display your text commands. `fs` (Full Screen) followed by `cs` will give the full screen over to graphics—but you will be unable to see what you type in at the keyboard. I normally use the command

`setsplit 4`

which splits the screen to give only four lines for text, leaving the rest free for graphics. If you prefer a larger or smaller text area under the graphics screen, simply alter the number accordingly.

From its central position, the Turtle can be made to move forwards (`fd`) and backwards (`bk`), and to turn to the right (`rt`) or left (`lt`). Try experimenting with these commands:

`fd 100` takes you forward 100 units
`rt 90` turns the turtle right 90 degrees
`fd 100` takes you forward 100 again, but 'forward' now is not the same way as 'forward' was before you turned right.

`pu` makes the turtle pick up its pen, so that when it moves it doesn't leave a trail
`pd` puts the pen down again

You can string a series of commands together just by putting them one after the other on the same line, like
`fd 100 rt 90 fd 100`

If you get lost, `cs` will always clear the screen, returning the Turtle to its home at the centre and leaving it pointing north once more. It is useful to think of the screen in terms of north, south, east and west.

The diagram shows the extent of the screen in terms of the number of units which the Turtle can travel from the centre before reaching the edges. However, the screen is, in effect, only a tiny 'window' onto a vast plane which can be travelled by the Turtle. If you direct the turtle to go 'fd' enough to be outside the field of view, it will quite happily do so, but of course you won't be able to see it any more.

You can track the position of the Turtle, whether on-screen or off, by using the primitive

`tf`
 (standing for 'Turtle Facts'). Try giving this command and seeing what happens. The first two items in the list that prints out are Cartesian co-ordinates giving the precise current position of the Turtle. Centre screen is 0 0.

Proceed to procedures

Try these four instruction lists (clear the screen between each one!)

- `fd 200 rt 90 fd 200 rt 90 fd 200 rt 90
fd 200 rt 90`
- `repeat 4 [fd 200 rt 90]`
- `repeat 3 [fd 200 rt 120]`
- `repeat 6 [fd 100 rt 60]`

GNINUT TURNING TURTLE

John Connell begins a new series introducing the delights of programming in Logo

The PCW comes with two programming languages. Everyone knows about Mallard BASIC, but also, hidden away on side 4 of the master discs, is Dr. Logo. This language works quite differently to BASIC, and over the next six issues I hope to demonstrate the power and potential, the strengths and weaknesses of the PCW's implementation of Dr. Logo.

Instruction list two is a shorthand version of number one—the 'repeat' command simply repeats what is inside the brackets however many times you tell it. Three and four are simply further examples of the same. This is Logo in 'command mode', in which your instructions are executed each time you press [RETURN].

The next step, of course, is to begin to build these and other primitives into 'procedures'. Logo programs. If you want a procedure which will draw a square, then type

```
to square
  repeat 4 [fd 200 rt 90]
end
```

This says to Logo, "in order to do a square, execute all the commands between here and 'end'". By typing in `square` the Turtle will draw exactly that. You have, in effect, added another primitive to our Logo vocabulary. Realising this is the big step towards appreciating just how Logo works—you build up a series of commands and operations which will eventually allow you to do whatever you set out to do. Logo is an *extensible*

Making a Logo startup disc

Since you are going to be regularly running Logo on your PCW, you will find it handy to make up a special disc which will start the PCW up and then load Logo automatically.

Take a blank, formatted disc for the A drive, and the two PCW master discs that came with the machine. Using PIP, copy the following files from the master discs onto the new disc:
`J14CPM3.EMS` (found on side 2)
`SUBMIT.COM` (side 2)
`SETKEYS.COM` (side 2)
`KEYS.DRL` (side 4)
`LOGO.COM` (side 4)

Now, using a text editor like RPED which is also on the master discs (see the PCW manual for details on running RPED), create a new file on the Logo startup disc to be called `PROFILE.SUB`. This file should contain the two lines

```
SETKEYS KEYS.DRL
LOGO
```

Now whenever you use this disc as a start-of-day disc (ie. insert it in the drive after you turn the power on or reset the machine), Logo will start up automatically.

language: if Dr Logo does not have the primitive you need, you simply define it yourself by building from the supplied primitives.

We can also introduce a variable into the procedure-name, like this:

```
to square
  repeat 4 [fd 200 rt 90]
end
```

'side' is a variable name, which means that whatever number you type after square will be used wherever 'side' is used. For instance, if you give Logo the command `square 100`, a square of side 100 units will be drawn. `square 300` will draw a square of side 300 units. The two short procedures in Listing One make use of some of the things you have looked at so far — once you have it working, why not try to add some short procedures to draw windows, a chimney, a fence, and so on?

To save your own work on a disc, type `save "filename`

The 'save' command saves all the procedure definitions that you have typed into the Logo workspace under your chosen filename. This means that if you want to save a single procedure on disc you will first have to erase any other programs you happen to have in the workspace first. The filename you choose can only be a maximum of eight characters long.

Load "filename
will load named file from the current disc into the Logo workspace.

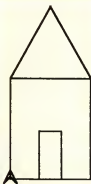
Big is beautiful

One simple, if imprecise, way to compare the relative powers of Logo and BASIC is to look at how much space each of the two Of course, it means that you have less space to play around with when you use Logo, but that's a shortcoming of CP/M, not a failing of Logo! Logo is a language awaiting the march of the megabytes.

▼ Listing 1

```
to house :size
  pd repeat 4 [fd :size rt 90]
  fd :size rt 30
  repeat 3 [fd :size rt 120]
  rt 60 fd (:size / 2)
  rt 90 pu
  fd :size rt 90 fd (:size / 8)
  rt 90 pd
  fd (:size / 2) rt 90
  fd (:size / 4) rt 90
  fd (:size / 2)
  setpos [-200 -200] seth 0
end
```

```
to setup
  fs cs pu
  bk 200 lt 90 fd 200 rt 90
end
```



▼ Listing 2

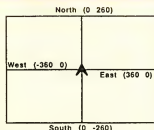
```
to pond
  ct cs st
  setsplit 2
  pu bk 200 lt 90 fd 200 rt 90 pd
  repeat 4 [fd 400 rt 90]
  pu home
end
```

```
to waterflea :dist
  make "move random :dist
  fd :move
  check
  rt random 360
  waterflea :dist
end
```

```
to check
  if xcor > 200 [oops]
  if xcor < -200 [oops]
  if ycor > 200 [oops]
  if ycor < -200 [oops]
end
```

```
to ycor
  op item 2 tf
end
```

```
to oops
  type char 7
  bk :move
end
```



▲ The visible limits of movement for the turtle on the screen

The `to...end` method of defining a procedure is useful with very short procedures. It has the advantage, however, of making it impossible to amend a line once you have pressed [RETURN]. You have to wait until the whole procedure has been defined before you can rework it. An alternative is to call up the Logo editor by

ed
which will clear the screen, allow you to write your procedures and amend any parts of them at will (using the cursor and delete keys), and then enter them into the Logo workspace as defined procedures when you tap the [EXIT] key. The editor does not restrict you to working on only one procedure at a time; you can have as many as the editor's workspace allows. To recall an already defined procedure into the editor for amendment, simply type

ed "procedurename
and you will be presented after a second or two with the text of the named procedure, which, again, you can rearrange to your heart's content.

A taster

Finally, here is a taster of what Logo can achieve with a simplicity which even the powerful Mallard BASIC cannot match. The listing is given in Listing Two. Erase all previous procedures from your workspace with the command

```
erall  
type in the listing, check it and then type  
pond waterflea 100
```

(you can, of course, change 100 to an input of your own choice). The turtle has taken on the characteristics of a waterflea, 'evolved' by yourself, which is trapped within the confines of a square 'pond'. Whenever it attempts to step onto land, the PCWs wonderful beep sounds and it is hauled back into the pond. You have created, in Logo jargon, a *microworld*, albeit a very simple one.

Work your way through the listing and figure out how it does what it does. As a simple exercise to test your new-found knowledge of Logo, why not try to rework waterflea so that the pond has a narrow outlet through which the flea can escape if it is lucky enough to find it?

When you have had enough, press [STOP] to interrupt the program, and then type `bye` to leave Logo.

Listing One

This simple listing draws a house of a size specified by you. It uses a number of things we have looked at up to now, with two additions.

Type in the listing and then type
setup house 200

Once you have it working, try changing the input to 'house'.

There are two new commands used here, `setpos` and `seth`. 'setpos' moves the turtle directly to the specified co-ordinates, and 'seth' (for 'set heading') turns the turtle so that it faces the bearing given. If you look at what happens at the end of this program's running, you should be able to see what the 'setpos6' and 'seth' commands are doing.

Listing Two

This listing involves a number of aspects of Logo which will become clearer in the later parts of the series. In the meantime, brighter sparks among you may like to ponder on:

- ▶ What is the difference between 'move and :move?
- ▶ Why is the input for the primitive random 360?
- ▶ 'xcor' and 'ycor' use the list brought up by 'tf'. From this, you can see how the primitive 'item' extracts a particular element from the list — either the first (in 'xcor') or the second (in 'ycor').

EXIT

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CHECK MATE

BASIC CHECKER

by Adrian Wilkins

At last someone has taken pity on the harassed 8000 Plus Listings Editor and come up with a really neat idea to help check that you have got your listings right.

All you need to do is type in this listing from Adrian Wilkins. You have to get this one right by yourself of course but thereafter you have an invaluable aid which can be used every time you can't get an 8000 Plus listing to work.

You will see that every listing printed this month has a four-digit code at the extreme right of each line. This code has been calculated by the Basic Checker program. This isn't part of the program, so don't type it in with the rest of the line!

When your listing won't run save it to disc as an 'ASCII file' with the command

```
SAVE "filename",A
```

where 'filename' is the name chosen by you for the program. You then load and run the checker program with the command

```
RUN "CHECKER"
```

(assuming you saved it as the file CHECKER.BAS) and you will be asked for the name of the file you just saved.

Type it in, press [RETURN] and put some paper in your printer. The program lists out your non-working program and adds a code at

the end of each line based on what is written in the line. So if you have typed a 0 for a Ø or a 1 for a 1 for instance you can see immediately what line is causing the problem – simply because the code at the end of the line is different from the one listed in 8000 Plus.

When you have spotted the erroneous lines, you will have to reload your program from disc with

```
LOAD "filename"
```

edit it and try again. This is because BASIC can't hold the checker program and your own program in memory at the same time.

The program has been made insensitive to lower or upper case (as these normally don't affect the program except for text in PRINT statements) and it also ignores varying numbers of spaces in lines as this too is often irrelevant. Where BASIC needs a space (for instance between LINE and INPUT on line 80) and one is missed out the program will not run and the error is obvious. The program is designed to catch those mistypings that BASIC doesn't spot as syntax errors.

Then when you have put everything right so that the codes are the same and it still doesn't work, wait for the inevitable correction in next month's Listings pages!

```

10 INPUT "Program name ",prog$:IF INSTR(prog$,".") = 0 THEN prog$=prog$+".bas"
20 IF FIND$(prog$)-"" THEN PRINT "Program not found" : PRINT : GOTO 10
30 LPRINT CHR$(15);CHR$(27);"W1";
40 LPRINT "Checksum listing of file ";UPPER$(prog$); " for 8000-PLUS"
50 LPRINT CHR$(27);"W0"
60 OPEN "I",1,prog$
70 WHILE NOT EOF(1)
80 LINE INPUT #1,z$
90 y$=UPPER$(z$)
100 check%=0 : j%=0
110 FOR i% = 1 TO LEN(y$)
120 y%=ASC(MID$(y$,i%,1)) : IF y%=32 GOTO 200
130 IF y% <> &HFC GOTO 180
140 PRINT "Error - Program was not saved in ASCII mode" : PRINT
150 PRINT "Do the following...",LOAD ";CHR$(34);prog$
160 PRINT ",SAVE ";CHR$(34);prog$;CHR$(34);",A" : PRINT
170 PRINT "and run the checksum program again" : PRINT : GOTO 230
180 j% = j% + 1
190 check% = check% + (y%-32) * (j% MOD 7) + 1
200 NEXT
210 LPRINT z$;TAB(120);HEX$(check%,4)
220 Wend
230 CLOSE 1 : LPRINT CHR$(18);CHR$(12);
240 END

```

10F7
19F1
0A0A
17C8
0771
050B
070F
05E8
057F
052A
07B0
0C79
0B00
1B99
1307
122A
17C6
0238
0497
032A
0B71
0316
0CE3
02C2

RAFFLE PRIZE WINNERS

by J Hellis

We know probably the easiest thing in the world to do is to pick raffle tickets out of a hat, but things are always more impressive when computers do them.

This simple program just asks you the two important questions, "How many tickets have been sold" and "How many prizes will there be". Assuming your tickets are numbered from 1 to the total number sold, the program then produces a list of which ticket number has won which prize.

Think how flash it would look down at the Dwyile Flonking Club, everyone clustered round the PCW waiting to find out whether

they've won the box of biscuits donated by the President's wife. It certainly would speed up the agony of most local raffle draws. The other important feature is that it actually prints out a list of winning numbers so you can remember who has won what when you sober up the next day. That must be worth the effort alone.

You may have seen the faithful old randomize facility before (see line 110) and then there's INKEY\$ to make the whole proceedings flow. All this in only 19 simple lines. Why wait for the next raffle. Start listing now.

```

10 PRINT CHR$(27)+"E"+CHR$(27)+"H":d%=0
20 INPUT "How many tickets have been sold -":t%
30 PRINT:INPUT "How many prizes do you have to present -":p%
40 IF p%>t% THEN PRINT "SELL MORE TICKETS THEN!":GOTO 20
50 PRINT:PRINT "Do you wish the prize numbers on the (S)creen or (P)rinter."
60 INPUT z$:IF UPPER$(z%)="P" THEN d%=-1
70 PRINT:PRINT "Press the <SPACE BAR> to select the winners."
80 PRINT:PRINT
90 FOR b%=1 TO p%
100 WHILE INKEY$=""
110 a%=INT(RND*t%+1)
120 a%=STR$(a%)
130 FOR c%=1 TO b%
140 IF INSTR(e$,a%)<>0 THEN GOTO 110
150 NEXT c%:WEND
160 e$=e$+a$
170 IF d%=0 THEN PRINT "Prize no ";b%;" goes to ticket number ";a%:GOTO 190
180 LPRINT "Prize number ";b%;" goes to ticket number ";a%
190 NEXT b%

```

0A03
122E
1853
1712
200B
000D
19CC
0750
05DF
06EF
05C5
0340
0610
04CA
065E
025B
1986
1593
0369

How many tickets have been sold -? 1000

How many prizes do you have to present -? 5

Do you wish the prize numbers on the (S)creen or (P)rinter.
? S

Press the (SPACE BAR) to select the winners.

```

Prize no 1 goes to ticket number 490
Prize no 2 goes to ticket number 846
Prize no 3 goes to ticket number 592
Prize no 4 goes to ticket number 65
Prize no 5 goes to ticket number 271

```

OK

Feedback ... Feedback ... Feedback ... Feedback ... Feedback ... Feedback ... Feedback ... Feedback

No actual errors have come to light in last month's listings, but some people have been having trouble distinguishing colons and semi-colons in the LocoScript Index listing. In particular, line 100 reads

```
100 LPRINT:LPRINT atton$;"Group = ";groupnam$;attoff$
```

Also, G.M. Pole writes with a couple of improvements for the same program. He suggests that you change line 120 to read

```
120 file$ = STRIP$(FIND$(dr$ + ".*",filecount))
```

which avoids some potentially strange side effects when it tries to catalogue the LocoScript boot-up file J20LOCO.EMS.

And he also suggests that 160 should be amended to

```
160 OPEN "I",1,dr$+file$
```

This will allow the program to be used from a drive other than the one that the LocoScript files are on.

Feedback ... Feedback ... Feedback ... Feedback ... Feedback ... Feedback ... Feedback ... Feedback

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WORD COUNT

by Mark Morris

The fascinating thing about publishing programs in 8000 Plus is that no matter how clever they seem there are always a number of clever people out there who can take that listing and make it do something better.

For instance here is a contribution from Mark Morris of Gwent. We recently reprinted (PostScript, May) a word count program that had been published in the first edition of 8000 Plus. This did count the words in LocoScript files but only after you'd converted them into ASCII files.

So what has Mark done? He's only gone and converted it so that it actually counts LocoScript files without converting to ASCII. What a kind person. He modestly admits that it seems to be accurate to only

0.5 per cent. We found in comparing it with wordcounters in the office that this small error tended to underestimate rather than overestimate the length. All writers who get paid by the word please note: you could be diddled out of 0.5% of your salary!

Here's a quick recap on how to run this program. When in LocoScript, make sure that the file you want to count is in group 0 – the leftmost group of the disc. Now start CP/M and BASIC up, run the wordcounter program and give the name of the LocoScript document when asked. Hey presto, the words are counted.

We have tested this program with LocoScript 1.2, but results are not guaranteed with any other version number, especially LocoScript 2.

```

10 MEMORY.,.,255
20 es$=CHR$(27):PRINT es$"H";es$"J"
30 INPUT "Enter name of file you want to count";file$
40 OPEN "r",1,file$,255
50 FIELD 1,255 AS buf1$
60 word%=0:line%=0
70 PRINT es$"H";es$"J":PRINT"Wordcount for ";file$:PRINT"Counting line ";es$"J"
80 GET 1
90 IF EOF(1) THEN GOTO 190
100 inword%=0:line%=line%+1
110 PRINT es$"k";es$"J";line%,
120 FOR i=1 TO LEN(buf1$)
130 c$=MID$(buf1$,i,1)
140 IF c$=CHR$(129) AND inword% THEN word%=word%+1:inword%=0
150 IF c$<>CHR$(129) THEN inword%=-1
160 NEXT i
170 IF inword% THEN word%=word%+1
180 GOTO 80
190 PRINT:PRINT "Total number of words counted in ";file$;" : "word%;"
200 CLOSE 1
210 CLEAR
220 END

```

0402
043E
1563
064B
0657
0705
1C0E
02B1
08B7
0BE1
09F3
0B6A
0E02
161B
0C71
036F
0C67
0371
1B39
0334
02E4
02BE

TELETYPE

by J.D. Sault.

Does your little heart pound with excitement when the football scores start to appear through the teleprinter on the TV of a Saturday afternoon? Would you like to be able to enjoy this thrill any time of the week?

Here is an extremely short program which will print any message of your choice on the screen at teletype speed – complete with totally authentic clacking noises. It was sent in as part of a larger program

that unfortunately we don't have room to print but we thought you would have fun trying this out if you had a moment to spare.

Why not write a random football score generating program, sit down with a polls coupon, and enjoy all the fun of a Saturday afternoon all week? Or perhaps a bit more practically why not adapt it and use it in your own programs for important prompts. No-one would dare to ignore such an important sounding statement.

```

10 READ x$
20 FOR x = 1 TO LEN(X$):PRINT MID$(X$,X,1);CHR$(7);:FOR xx = 1 TO 150
30 NEXT:PRINT
40 DATA This is the message that will be printed to the screen

```

02E4
164F
059C
194E

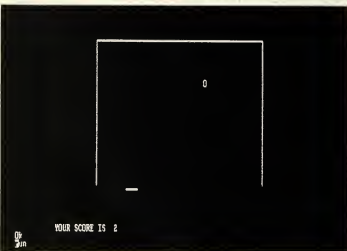
VIDEO SQUASH

by W.D. Atkin

Our older readers will shed a nostalgic tear at this little program. The bouncing ball game was a forerunner of all the high technology zap-'em-up arcade games of today. In those days people quite happily fed 10p's into a machine all day just to experience the heady pleasure of batting a tiny computerised ball round the screen. But in those days we thought digital watches were pretty neat too.

The game itself is simplicity to play. You move the bat (the green flat thing at the bottom) from side to side using the cursor keys. All you need to do is to be there when the bouncing ball lands. It even adds up how many times you hit the ball and tells you at the end. What could be simpler? Our best score is six but we never were very coordinated.

And for all those who worry about having to type in long listings this one is only 16 lines long. Don your sweatbands, flex your fingers and give it a whirl.



```

10 PRINT CHR$(27) + "R" + CHR$(27) + "Y": PNT = 0
20 DEF FNAT$(X,Y) = CHR$(27) + "Y" + CHR$(X+32) + CHR$(Y+32)
30 BAP = 38: LR=1: UD=-1: BLX=20: BLY=21: PRINT FNAT$(BLX,BLY) "O"
40 GOSUB 150: PRINT FNAT$(1,20): CHR$(150);
50 FOR X = 20 TO 60 : PRINT CHR$(154); : NEXT X: PRINT CHR$(156)
60 FOR X = 2 TO 19: Y=20: PRINT FNAT$(X,Y): CHR$(149): Y=62: PRINT FNAT$(X,Y): CHR$(149)
65 NEXT X
70 PRINT FNAT$(BLX,BLY) " ": BLX=BLX+UD: BLY=BLY+LR: PRINT FNAT$(BLX,BLY) "O"
80 IF BLY > 59 THEN LR=-1 ELSE IF BLY < 22 THEN LR=1
90 IF BLX < 3 THEN UD=-1: PNT=PNT+1
100 IF BLX < 20 THEN GOTO 120
110 IF ABS(BLY-(BAP+3)) > 1 THEN GOTO 160 ELSE UD=-1: GOTO 70
120 MOV$ = INKEY$: IF MOV$ = CHR$(1) AND BAP > 20 THEN BAP = BAP - 2
130 IF MOV$ = CHR$(6) AND BAP < 60 THEN BAP = BAP + 2
140 GOSUB 150: GOTO 70
150 PRINT FNAT$(20,BAP) " " CHR$(154): CHR$(154): CHR$(154) " " : RETURN
160 PRINT FNAT$(25,10) "YOUR SCORE IS " PNT

```

04E0
0EB7
14F5
008A
146E
1674
0385
1032
0F04
0E05
0859
1390
1590
0F4C
0674
1334
0E05

How to type a listing in

The first thing to do is to load Mallard BASIC. Turn on your PCW and put a copy of the CP/M master disc into drive A.

When the A: prompt appears, type BASIC and press [RETURN]. After a few seconds a message about Mallard BASIC will appear on the screen, ending with the prompt 'Ok'.

Type in each line of the listing very carefully, starting with the line number and finishing with [RETURN]. The four figure code at the right of the line should not be typed - see the 'BASIC checker' listing for details. Be careful not to mix up capital I and lower case l, capital O and the digit 0, colons and semicolons. You should always save any listing before running it. To do this, find a work disc with space on it and type SAVE "PROGRAM" [RETURN]. Of course you can choose any name up to eight characters in place of 'PROGRAM'.

When you've finished, type LIST [RETURN] and the whole

program will appear on the screen. Check it, and if any lines are wrong correct them with the 'line editor'. For example, if there is a mistake in line 100, type EDIT 100 [RETURN]. Use the arrow keys and the delete key to correct the line, and press [RETURN] when you've finished. You can delete a whole line by typing its number and pressing [RETURN].

To run the program, simply type RUN [RETURN]... and wait for it to go wrong.

It's more than likely that no matter how carefully you typed in the listing it won't work first time. You may get an error message such as 'Syntax error in 100'. List the program out (LIST lists it on the printer instead of the screen) and check it against the original in the magazine.

The line number given in any error message isn't necessarily where the error is - it is simply the point at which the PCW gets stuck. You may have to look elsewhere for the error.

When you find the mistake,

either retype the complete line or use the line editor as described earlier to correct it. Rerun the program, and go on correcting it until it works. Once the program is running correctly, save it again. To leave BASIC and return to

CP/M, type SYSTEM [RETURN].

If you want to run the program another day, start BASIC up and type LOAD "PROGRAM" (or whatever name you used in place of 'PROGRAM'). Then just type RUN to run it.

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To submit a listing you must

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Keep track of the sectors

Frank Peters helps you look inside a disc with public domain program DU-V87.COM.

I decided to write about DU-V87.COM when in the throes of retrieving 350k of ASCII text files from a disc. I had wiped the directory off by running DISCKIT over the first two tracks before I realised I had the wrong disc! Flicking open the drive door I managed to save the actual files. But where were they on the disc? Without the directory the CP/M cannot work out where it has saved them.

If you begin with a blank formatted disc CP/M will save the first file on the first available space in blocks of data one after another. The disc operating system sticks a second file on after the first. So it would seem a doddle to retrieve the files. But life is not that kind.

When you erase a file you don't actually erase the file (confused?) All you do is change one character in front of the filename in the directory. This character states which user area (or Locoscript group) the file is stored in. If it is a hexadecimal byte from 0 to 0F it means the user area, 20 means a disc label, and 'ES' means the file's erased. Group names are filenames with blank files.

An erased file stays there until you save other files. If there is no room at the end of the last file it looks for 'holes' left when you erased a file. The disc operating system re-uses this space to store bits of the new one. As each block is saved CP/M goes to the directory and fills in the location after the filename.

When it closes the file it drops a byte into the directory to say how big the file is. Next time you save a file to disc and the disc is nearly full listen to the head inside the disc drive going back and forth from the outside of the disc where the directory is to the inside where the last spaces are.

Once you have used a disc for a while, saving and erasing files, it will be in a right mess and without a look up table along with each filename CP/M would also be confused. Having wiped off the directory, you can understand why a grown man was almost driven to tears.

DU want help?

With DU I set to work. First of all CP/M discs formatted by DISCKIT follow closely the standard laid down by IBM. One of these standards is that the first 16 characters (or bytes) of the first track and sector have details of what kind of disc it is - 40 or 80 track per side? Single or double sided? How many sectors per track?

This had been removed so if I tried to use the disc it would result in some nasty noises as the head motor tried to access the disc with an incorrect format. Diskkit fills up the whole disc with the Hexadecimal byte value of 'ES', thus the poor old operating system would have looked at the disc information and deduced that it must be a disc with 229 tracks, 229 tracks per side, with 229 sectors per track!

There is a user's manual with the program and online help. If you want to investigate how discs are laid out

format a disc that you don't mind messing up and play with that. When you know how to drive around the program you can start to attack those damaged discs.

The first thing was to write in the data that used to be there. I inserted a disc with the same format into the B-drive and ran up DU-V87, logged on to the B-drive and asked the program to go to track 0 sector 1. Swapping discs I wrote that first sector on the damaged disc so it wouldn't throw a fit if I tried to look at the disc with any CP/M programs.

Where to go

If you want to get hold of Public Domain software, there are three sources which may interest you.

The CP/M user group publishes a quarterly newsletter and runs a vast software library, though not all of it relevant to PCW users. The software is free, but there is a membership fee and a copying fee per disc. Send a large SAE to: The Secretary, CP/M User Group, 72 Mill Road, Hawley, Dartford, Kent DA17RZ.

PD Software can also supply a large range of public domain programs, again with administration charges. Write to: PD Software, Winscombe House, Beacon Road, Crowborough, East Sussex TN6 1UL.

If you have a modem, you can download software from my bulletin board (among others). This is active 24 hours a day on Hitchin (0462) 700644.

Where did I put them?

Now to find what the operating system had done with my files. Using the view command I could speed through the erased system tracks until I reached the first undamaged sector. I recognised the first few words of a file I had recently typed so I could 'yank' the block into memory.



Each directory entry has two rows of 16 bytes - one for the filename, one for where the blocks are. See how at the end the empty directory space is filled with 'ES'.

Looking at the last few words of that first block I was able to deduce easily enough what came next as the start of the next, second, block. Now was the time for DU to do the hard work and find what CP/M had done with it. This I did using a command to search for an ASCII string.

Having found the next block, I 'yanked' that into the memory buffer. This was repeated for each block until I came across the end of the file - the view command always stops at the end of a file. Inspecting the final sector more closely you can usually see the dozens of marker bytes 'IA'. Quite often you get a file intact, or at least a sizeable chunk of it, so it is a lot easier than it sounds.

That was one file done. All I had to do now was find the other dozen or so. On and off it took me a couple of days - but it's got to be better than starting all over again.

The first 16 bytes on Track 0, Sector 1

Byte 0: Disc type
Byte 1: 'Sidedness'
Byte 2: No. of tracks per side
Byte 3: No. of sectors per track
Byte 4: Sector Size
Byte 5: No. of system tracks

Byte 6: Block size
Byte 7: No. of directory blocks
Byte 8: Gap length (read/write)
Byte 9: Gap length (format)
Bytes 10-15: Not used

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TIP-OFFS

Caution! Reading these pages could give you an unfair advantage over ordinary mortals. Can your conscience stand it?

Whether you're deep into the bowels of dBase II or just skimming through LocoScript, there's something here for you. This month's wrinkles cover desktop publishing aids, redefining LocoScript's keys, devices to strip the perforations from your stationery ... the tips never end.

Congratulations and thanks to the tune of £30 prizes go to Protecht fiend Terry Dwyer of Quorn, Loughborough for his automated address book, and to Londoner John Clark for discovering Logo startup files.

Send your brainwaves to *TipOffs*, 8000 Plus, 4 Queen Street, Bath BA1 1EJ, and wait for your £30 cheque to flutter onto the doormat. Your magazine needs you!

Protext address list

Here's a handy way to file names and addresses for envelope or label printing in Protext. You can set up a Protext EXEC file which will go through a list of your most commonly used names and addresses and print the one you want.

Create the file of names and addresses so that each entry consists of: (1) a brief code name which is easy to remember; (2) the correct full name; (3) up to five lines of address; and (4) a single

blank line to mark the end of each entry. Because of the way Protext works, any line containing a comma must be enclosed in quotes - see the example.

Save this file and call it "addr". Now type the set of Protext commands shown in to a file called "env" and save it. To use this, having inserted your envelope or label in the printer type

pg env
The screen will ask for a name, so you type the short mnemonic for the address you want, whereupon

the correct name and address are printed. If the code-name is not found, the Protext prints an error message and no harm is done.

Terry Dwyer
Quorn, Loughborough

```
8000
PostScript
8000 Plus
4 Queen Street
BATH BA1 1EJ
```

```
two
"R. Two, M. A."
2 Two Lane
Twoside Estate
Twotown
Doubleshire
BB2 2BB
```

```
ron
Pres R. Reagan
The White House
WASHINGTON DC
USA
```

A date with dBase II

dBase II is one of the programs that needs the current date to be entered, and it is tedious to have to do this each time you run it, especially if you have a real-time clock to maintain the system date for you.

It is possible to write a dBase procedure to read the date from the PCV. Two PEEKs are needed to do this:

```
PEEK(64500) + (256 * PEEK
(64501))
```

gives the day number counting from 1 January 1978. For example, 1 February 1978 is day 32, 1 January 1979 is day 366, 21 April 1987 is day 3428 etc.

Knowing this, it is then quite simple to write a routine to pull out the date in a more conventional day/month/year form.

Tim Smith
Canons Management, Southern House, 4-6 Peterborough Road, Harrow, Middx HA1 2BQ

● There follows a dBase procedure listing showing just how to convert the date. This is too long to reproduce here, but Tim Smith kindly offers to provide this free to anybody who sends him a disc on which to put it and an SAE.

Doctoring DR Graph

If you use DR Graph, you will know how slow it is to get hard copy from the standard printer. Often you will need a rough test printout while developing a graph, but a screen dump leaves a lot to be desired. Well, here's the answer.

You may have noticed that on the output menu you are given a choice of a plotter, a printer or the screen. Hands up all those with a plotter! Hmmmm, not many. If you don't use a plotter, you can modify your startup disc so that you can print out a low resolution copy much faster than the normal high resolution one.

What you need to do is edit the file ASSIGN.SYS (using, for example, the RPED editor); you will find the file looks something like

```
21 @ DDFXHR8
11 @ DDHP7470
01 @ DDScreen
```

You should change it to:

```
21 @ DDFXHR8
11 @ DDFXLR8
01 @ DDScreen
```

and then transfer (with PIP) the file DDFXLR8.PRL from side 4 of the master discs to your DR Graph startup disc. Now if you select 'plotter' output for your graph, you will get a low resolution draft printout on the ordinary printer.

You may find some of the text fonts appear differently in low and high resolution modes, but you will have to live with it.
Derek Holcroft,
Dennistoun

```
>tm 0
>ps on
>pl 15
>sm 20
>av Name
>df addr
>rp
>rv person, fullname, ad1, ad2, ad3, ad4, ad5
>un person=name
&fullname&
&ad1&
&ad2&
&ad3&
&ad4&
&ad5&
>cf
>ps off
```

Modern keyboard layouts

A letter in the PostScript pages of the June issue asked whether it was possible to redefine the LocoScript keyboard to conform to the Dvorak standard. This is a much more efficient layout than the standard QWERTY one.

Luckily, hidden away in the LocoScript system files is its own

EMS file, so to see the relevant section type:
dA2B0

and you should see the block of gobbledegook appear. At the right of the screen, you will see 'qwertyuiop...' embedded in the text, and then repeated later on in upper case. The lower case q is at location A2A4, and the upper case Q at A2D3. SID has a substitute command to overwrite these key



definition of what key produces which character. What you have to do is 'hack' into this file and alter the list, so that LocoScript thinks you have pressed L when really you typed P. To recap, the Dvorak layout is shown below, with the corresponding QWERTY keys.

First, start up CP/M and make a copy (with DISKIT) of your LocoScript startup disc on a new blank disc - once you've made the Dvorak alteration, you may want to have an old version around with the traditional keyboard layout still operative. Then remove the disc, insert your copy of side 3 of the master discs, and type SID [RETURN]. SID will acknowledge his presence with a rather terse sign-on line, and will then display a * symbol which is the prompt for more input.

At this point put your intended Dvorak-style LocoScript startup disc in the drive. What follows assumes you have LocoScript 1.2, whose system file is named J20LOCO.EMS. If you have a different version, you will have to find out the corresponding file name and modify the commands shown. Type rJ20LOCO.EMS and wait for the * prompt to reappear. The keyboard layout is defined towards the end of the

definitions, so type

```
sA2A4
";,pyfgrl[LAoeuidhtns]#zqjxbmwv
```

sA2D3

```
";,PYFGRLCAOEUIDHTNS
<>ZQJKBWMW
```

All you need to do now is save the modified file, which is done with the command wJ20LOCO.EMS and press [STOP] to leave SID. When you start LocoScript up with this modified disc, you should find your new keyboard layout working.

The final task is to relabel the keys. It may be possible to prise the keys off their old positions and click them back into the new ones, but if you break anything you are in trouble. The other option is just to write-out the old lettering and Letraset on new ones, coating with nail varnish to protect it.

John Eggeling,

R. Wilson, and others

```
;,PYFGRL
QWERTYUIOP
```

```
A O E U I D H T N S
A S D F G H J K L ;
```

```
Z Q J K X B M W V
Z X C V B N M ,
```

▲ The Dvorak keyboard

Logo autostart programs

The chief problem with using DR logo on the PCW is that it seems to be extremely badly documented. Here are a couple of facilities that you may not know about:

1 When DR Logo is started, before it puts the 'P' prompt on the screen it apparently looks on the disc for a file called STARTUP.LOG. If it finds one, it automatically loads any Logo procedures the file contains into your workspace. So, if you have any procedures you use in lots of programs, save them from your workspace onto your Logo startup disc with the command

```
save "startup
Logo reads STARTUP.LOG as though you were typing at the keyboard, so if you edit the file directly (it is a simple ASCII file, so you can use RPED) you can include direct commands to run procedures too.
```

2 The command char 27

produces the notorious 'Escape' character (ASCII code 27), and this can be used to produce various effects to control the screen, as described in Appendix III 'Terminal Characteristics' in the CP/M manual. For instance:

```
type word char 27 "0
turns off the infuriating 'Drive is A' message at the bottom of the screen, and
```

```
type word char 27 "p
type word char 27 "q
respectively turn reverse video on and off.
```

3 You can similarly control the printer. The command copy on makes the PCW echo all output to the printer, and copy off stops the echoing. So, using the information from Appendix II of the manual,

```
copy on
type word char 27 "M
copy off
sets the printer up to Elite text (12 pitch).
```

John Clark

London SE1

Make room, make room

One of the drawbacks of Mallard BASIC is the lack of support for multi-line statements. Having to resort to cramming everything in an IF statement onto a line separated by colons makes the resulting listing difficult to read and, therefore, difficult to debug.

A way to overcome this is by using lots of [TAB]s to align multiple statements beneath each other. You can also add a 'dummy' REM to each line to space the listing out. [TAB]s and spaces don't affect the meaning of a line at all (unless they are in the middle of a word). Compare the example aligned listing line shown with the original, which is taken from the 'MPC Calculator' listing in the June issue.

Of course, listings can't be

printed this way in magazines because they would take up too much space on the page, but you can perform your own mental conversion as you type them. After the line number, press [TAB] once, then at each colon press [TAB] until you get to a new line, then put the colon in, then [TAB] again to align the new line with the one above.

However, things may go awry when you print out unless you make sure the printer and screen are the same width. Before you type any listing in, you should give the BASIC command

```
WIDTH 80
```

```
WIDTH LPRINT 80
```

Now your printout will correspond to the screen settings.

P.L. Sanders

Brighton

```
350  a$=INKEY$
      WHILE a$=""
        a$=INKEY$
        V$=a
        IF a=0 THEN 350
340  RETURN

330  a$=INKEY$ WHILE a$="" a$=INKEY$ V$=a:INSTRM$,a$ IF a=0 THEN 330
340  RETURN
```

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TIPOFFS

SuperCalc's zero option

If you work with large spreadsheets, you probably spend more time than you would like scrolling the screen left and right to see all the columns you need to. Usually you don't need to see all the columns at the same time, and if you use SuperCalc2, there is a neat trick you can use to make things easier.

The trick is that SuperCalc can set the format of a column to have a width of zero. Cells in such columns can still be referenced from other cells, but the columns do not show on the screen or printout. The command to do this is

/F,C,range,B

This means that the columns you don't need to see at any particular time don't clutter up the screen. When you do need to see them again, either reformat them to the standard width, or Zap the whole spreadsheet and reload it from an un-spiked version.

Henning Brondum-Nielsen
Rannoch Stn, Perthshire

The right image

One of the least satisfactory aspects of long-term working with the PCW is the poor quality of the screen image, with its lack of contrast and highly reflective surface. Most of the available anti-glare filters are either costly, or use shiny plastic, or both.

There is a simple, inexpensive solution. You need to go out and buy some fine mesh sheer black nylon or chiffon type fabric, as used in ladies' tights, a roll of double-sided sticky tape and a sharp balsaknife. Stretch the fabric over the screen, and you will see the grey-green background becoming nicely black, reflections suppressed and characters sharpened.

All you need to do is place a border of the tape around the monitor screen, stretch the nylon or chiffon over the tape so that it is taut, add some more tape to secure it in place, and trim off the excess.

D. Jacques
Wootton Common, Isle of Wight

Remarkable thought

Just a quick recommendation for anyone who has had problems with disintegrating markings on keys.

Try carefully restoring the lettering with a black Staedtler Lumocolor 313 marker pen — it has a very fine point and, most important, after a few seconds it won't smudge, even on plastic.

Gary Jones
Ruislip, Middx

72 8000 PLUS

2000 perforations in every bag

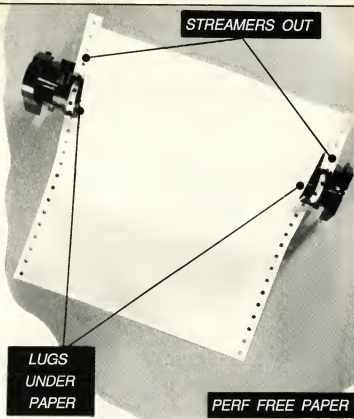
Did you know that your PCW printer has an automatic perforation-stripper? Well, to be honest it isn't entirely intended as such.

If you use continuous stationery with tear-off sprocket holes, it can be a chore to pull off all the edges after a long print run. However, with incredible cunning, if you thread the paper properly you can get the printer to do it for you.

Before you begin printing, tear a short strip off the leading sheet. Now thread these loose torn edges onto the sprockets, and the main body of the paper over the tabs that protrude from the sprocket mechanism. As the paper feeds you will find that the paper separates itself from the sprocket perforations. The diagram shows makes matters clearer.

You really need to use microperforated paper for this — you might find that the ordinary coarsely perforated paper jams and tears.

Dr. T. Dukes
East Dereham, Norfolk



Getting the measure of Newsdesk International

One problem with the otherwise excellent Newsdesk International desktop publishing program is that it is hard to judge from the screen what the size of an object will be on the printout.

Just remember this simple paper-to-screen conversion: on the 'x'-axis, each 1/16th of an inch on paper corresponds to 12 pixels on the screen. On the 'y'-axis, 1/16th of an inch on paper corresponds to 12 pixels on the screen. These are useful figures because in LocoScript you would typically use 10 characters per inch text (cLP10), and 6 lines to the inch line spacing (cLS6).

Therefore what you need to do is make up a grid showing the screen co-ordinates required for a given plan on paper.

From the *n*.ain menu, select windows and then set text. With the cursor keys and [ALT] expand the text window to span the full width of the page and up the page as far as 'y' co-ordinate 504. Return to the main menu, and select graphics → draw → pen. Press [C] to give a co-ordinate display, and draw two parallel lines across the foot of the page 4 pixels apart. Draw a second pair 8 pixels apart up the left hand edge. Stop the top end of these lines when the cursor reaches 504 pixels up the screen.

These horizontal and vertical

lines will be your 'x' and 'y' scales. Divide each into 12 pixel units. Every 60 pixels on the x-scale, and every 36 on the y-scale, extend the page marker 10 pixels into the page. These are the 1/2 inch position markers.

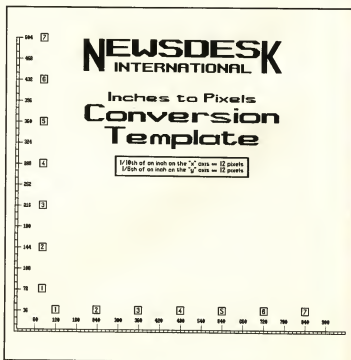
From the main menu move to fonts → write font → keyboard input. Use the default font to calibrate your x and y scales in pixels, and add any other text you

feel like. Now print the page out in high density.

Take your printed template to your local Copy Shop, and ask them to photocopy it onto A4 overhead transparency film. Now from your rough paper plan for a page you can work out where the text and lines should go on the screen to match it.

Ronald Macdonnell
Dingwall

END



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Money Manager Plus is very much easier and more direct to use than other accounting systems costing many times more, and provides features that would be difficult or impossible to program using sophisticated database/spreadsheet/graphics packages. Indefinite telephone support is included free of charge, because even novice computer users require so little!

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- Cheque or reference number, eg ABC123
- Class code, one of up to 50 defined by you to suit your circumstances eg 01- Overheads, 01- Rent, 02- Heat/Lighting, 02- Stationery etc
- or n/a- Motoring, m1- Petrol, m2- Road Tax, n/a- Maintenance etc
- Descriptive text eg, "Tax Rebate", "Refrigerator", etc
- Optional single-character mark as an extra identifier, eg, b- business, p- private, etc.
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- The amount of the transaction, debit or credit.
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THE

GOOD SOFTWARE

FILE

These pages provide a comprehensive guide to the Amstrad PCW software. Published in three monthly parts, this time it's the turn of Spreadsheets, Utility Programs and Educational Software to face the ultimate test. We've set out to cover every important piece of software we could lay our hands on, and to give you enough information to decide whether they are suitable for you.

Any software not listed here has either not been reviewed by us yet, or has been left out to make space for better programs. As well as a brief summary of what they do, the main Plus and Minus points for each program are listed. Those we think are particularly noteworthy have an elliptical flash on them ... have fun window shopping!

SPREADSHEETS

If a database replaces an address book, then a spreadsheet replaces the back of an old envelope. It is really an electronic piece of paper which allows you to jot down numbers, juggle them around and analyse the cost benefits of a situation. Vital for businesses, spreadsheets can be useful to home users too: if you want a bank loan you will find that showing your bank manager a spreadsheet printout of your living expenses answers a lot of questions!

A typical spreadsheet has a grid of rows and columns. This grid forms a screenful of cells identified by their column and row numbers, e.g. A3, K36 etc. Each cell can contain a simple number, some text to make the page easier to read, or a formula telling the spreadsheet to work out a number using values from elsewhere. The power of spreadsheets is in this last category, formulae. You can make a cell's value depend on the value of cells above it, or to the left of it, and this value is then automatically updated if you make any changes to the other cells.

So how do you choose between the various spreadsheets? One difference is sheet size, i.e. the number of cells you are allowed to work with. You'll need a few hundred for home use, and 1000 or more for business use. Another area is the range of formulae that you can use — all spreadsheets allow simple column and row totalling, but with some you can get complex statistical analyses too. As with all software, think very carefully what you will need before choosing.

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Both these programs aim to provide help to small businesses by keeping track of costs. You break down the job/product you are doing into small units and specify the cost of each basic component. The programs then analyse your profit margins and can produce printed quotes to convince customers you are superb value.

PLUS • MINUSES

- ☐ Well written manual aimed at businessmen not programmers
- ☐ Simple and robust to use
- ☐ Changes in material cost instantly reflected in all products/jobs
- ☐ Job Estimating page headers make a neat way of doing on-the-spot quotes

- ☐ Can't add new components to a description after it has been set up
- ☐ Cost of one component can't be dependent on another
- ☐ Inflexible design of printed quotes might be inconvenient
- ☐ Generally only suited to smallish businesses

Pocket CalcStar

£39.95 • Davis Rubin Associates • 0386 841181

GOOD VALUE!

A fairly traditional spreadsheet but with a few surprising features. It's not particularly large or fast, but is attractively priced and has all the basic functions. Can form part of an integrated system with the other Pocket products. A safe buy for the first-time user, and the documentation is up to the usual high MicroPro standards.

PLUS • MINUSES

- ☐ Good range of mathematical calculation functions.
- ☐ Good documentation — sections for beginners and reference.
- ☐ You can preset a course of cells to visit, for form filling.
- ☐ Can be integrated with other Pocket products, eg ReportStar
- ☐ Screen size is very small — at most 15 spreadsheet rows, and normally only 10.
- ☐ No auto-recalculate facility
- ☐ It's not very fast
- ☐ You can't type heading text etc. over adjacent columns

MasterPlanner

£69.95 • Comshare/NewStar • 0277 220573

MasterPlanner is essentially a souped-up version of PlannerCalc. For double the money, what you get is a slicker manual, better formatting options, a bigger workspace and the same basic inflexibility. Files from PlannerCalc can be used with MasterPlanner.

PLUS • MINUSES

- ☐ Same pluses as PlannerCalc
- ☐ Spreadsheet stored in virtual memory, i.e. can be as big as your disk
- ☐ Can read files from PlannerCalc
- ☐ Same minuses as PlannerCalc
- ☐ Apart from size and speed, no real extra power over PlannerCalc

Cracker 2

£49.00 • Software Technology/Newstar • 0277 220573

BOFFIN'S
BEST BUY

A spreadsheet designed with advanced calculating power firmly in mind, including statistical functions. The screen layout is totally defined by the user, and cell value calculations can almost be full programs, e.g. DO ... WHILE. It might prove too complex if all you want is simple spreadsheet operations. The screen messages are very helpful though.

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WHAT THE REVIEWS SAY

AtLast's manual will be a major selling point, since it is rare for a "budget" package to have such a large and well produced one as this...superb value for money and hard to pick holes in.
8000 Plus

Powerful features...quite easy to use...as clever as the user makes it
Amstrad Professional Computing

For £30 you won't find a more powerful database... If you're new to the world of files, fields and records then AtLast is the ideal way to be introduced. The manual is light reading for the beginner.
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"... a reasonably priced graphics program that can actually be used easily."
8000 Plus June '87

This extremely versatile and easy to use program allows you to draw lines, circles, ellipses, and polygons on your PCW. Regular shapes can be recalled from memory or entered from the screen with one key stroke. Sets of symbols can be designed for use in your drawings. These can be positioned with pixel accuracy by the left joystick which can be selected from various fonts. Drawing in one and two point perspective is also accommodated. There are fill and hatch facilities and the user is informed of program operation by a constantly updated readout at the top of the screen.

DRAUGHTSMAN PCW

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UTILITIES

PLUSES • MINUSES

- ☐ Can cope with very complex formulae
- ☐ Flexible screen format defined by the user
- ☐ On-screen prompts are very clear
- ☐ Graphs/charts can be automatically produced
- ☐ Documentation is large, but obscure and confusing
- ☐ You've got to do a lot of work just to get started
- ☐ Very complex for quick, simple applications
- ☐ Needs some programming skills to get the most out of it
- ☐ Free workspace is on the small side (17K) although memory is used efficiently

SuperCalc 2

£49.95 • Amsoft/Scorm • 0277 230222

BEST SELLER!

The best selling spreadsheet, officially endorsed by Amstrad SuperCalc 2 is broadly similar to ScratchPad Plus, and at least as effective, but it has a smaller workspace and is less flexible about the allowed spreadsheet dimensions. One bonus is that you can store sequences of commands in files for repetitive calculations.

PLUSES • MINUSES

- ☐ Excellent manual — specific sections for beginners and experts.
- ☐ Sequences of commands can be stored and later run from files
- ☐ "Data Interchanger" allows you to transfer spreadsheet data to other applications
- ☐ Comprehensive range of calculation functions available
- ☐ Screen can be split into 2 windows
- ☐ Spreadsheet is limited by memory size
- ☐ No graphical output facilities

Multipan

£69.99 • MicroSoft/NewsStar • 0277 220573

A well established package with all the features you would expect of a reasonable spreadsheet — it just lacks that something extra that recommends some of the newer ones. No support for command reading from files, or for "virtual memory". Adequate, but there are better for the money. And the manual can kill at twenty pages!

PLUSES • MINUSES

- ☐ Functions easily entered by menu selection
- ☐ Full range of features and functions
- ☐ On-screen help text is available as you go
- ☐ Sheets can be interlinked and data transferred between them
- ☐ You need a computer science degree to understand the manual
- ☐ No support for automatic execution
- ☐ Workspace is limited by CP/M memory space
- ☐ Printer output a bit cumbersome

PlannerCalc

£39.00 • Comshare/NewsStar • 0277 220573

PlannerCalc does for spreadsheets what Cobol does for programming languages. It is verbose and inflexible to use, but this does make you think very carefully about your application before entering data. Commands are all entered by pseudo-English phrases, rather than terse abbreviations. All work is done on a command line, not by moving the cursor around the screen.

PLUSES • MINUSES

- ☐ English-style commands are understandable by non-experts
- ☐ On-screen help available at any point
- ☐ Documentation is fairly well indexed
- ☐ Verbose commands are awkward to type in
- ☐ Editing and inserting data is restricted
- ☐ Grouping cells into ranges for copying etc. is difficult
- ☐ Control of sheet printouts is limited

ScratchPad Plus

£59.99 • Caxton Software • 01-379 6502

You want a traditional spreadsheet. ScratchPad Plus has most of the features you could want and more. Using "virtual memory" means you can have a huge data area, and the screen can be divided into windows to view different parts at the same time. Many of the commands bear a remarkable similarity to the big business spreadsheet Lotus 1-2-3.

PLUSES • MINUSES

- ☐ Virtual memory means you can have large spreadsheets
- ☐ Multiple windows mean you can see all the parts you want at once
- ☐ Good control over formatting
- ☐ Vast range of calculations possible
- ☐ Documentation sorely needs an index
- ☐ Screen prompts are cryptic; you need the manual to hand
- ☐ No provision for automatic execution from files
- ☐ No graphical output facilities

Write Hand Man

£29.95 • Hisoft • 0525 718181

This is a program which sits in the background whatever you are doing, and at the press of a command key a menu pops up in a 'window'. For example, if you are word processing, press the key and up pops a calculator, a notepad, a diary. Designed to eliminate paper, but the more advanced functions (notepad) are so cumbersome they fall to be at all useful. Better to buy a £4.95 Casio calculator and a pencil & paper.

PLUSES • MINUSES

- ☐ Results from the calculator can be 'pasted' directly into documents
- ☐ You can define the PCW keys to produce whatever strings you want
- ☐ Manual is technical and incomprehensible
- ☐ Notepad functions are slow and cumbersome to use
- ☐ Takes up a lot of disc space and CP/M workspace
- ☐ Costs much more than an HB pencil with notepad

BrainStorm

£49.95 • Caxton Software • 01-379 6502

An "ideas processor", BrainStorm is a computerised doodling pad. You can jot phrases down randomly, then organise them into a hierarchical plan, then expand each phrase into a finished idea, and finally print them out as a coherent document. If you find it easier to work at a keyboard than with a pencil and paper, this will really help you think.

PLUSES • MINUSES

- ☐ No limit to the number of sub-levels of plan you can have
- ☐ You can output the rough text, for a wordprocessor to polish
- ☐ Good documentation, including some neat ideas for applications
- ☐ Provides a unique service, which should be useful to you
- ☐ Needs better graphics (like GEM ?) to let you browse the structure easily
- ☐ The command keystrokes are unnatural — you can't use the cursor keys to move around the screen
- ☐ As a word processor, it is very primitive
- ☐ A notepad and a pencil would cost you £1 or less

Landscape

£19.95 • Systembuild • 0778 344388

This is a utility to print out ASCII files rotated on the printer page, so as to make full use of the extra page width. It provides page dimensions of up to 255x96 characters, in a fairly condensed typeface. Runs as a BASIC program.

PLUSES • MINUSES

- ☐ Readable, condensed draft quality typeface
- ☐ Simple and effective to use
- ☐ It's an undesirable hassle to have to run it from BASIC
- ☐ It's simple, but really needs more than its 200 words of documentation.
- ☐ No choice of fonts or text quality.

Oxstat

£113.85 • Medstat Ltd • 0602 411120

This is a specialised statistical analysis package for the PCW. Functions from calculations of means to multiple linear regression are covered, and it can do some rudimentary graphics for results. You can read data from spreadsheets or external devices.

PLUSES • MINUSES

- ☐ Comprehensive range of statistical functions implemented
- ☐ Good screen editing facilities for entry of data
- ☐ The spread seems acceptable, even though it is written in BASIC
- ☐ Even complex analyses are easily entered by simple menus
- ☐ Weak on graphical presentation of results

Planti

£24.95 • Database Software • 061-456 8383

Three programs to help you organise yourself. It looks after addresses, expenses, sorts out your personal finances and notes down all important diary dates. It also acts as an interest calculator and a calendar program.

- ☐ A lot of program for the money
- ☐ Well designed screen layout and operating system.
- ☐ Decent manual.
- ☐ Methodical approach needed to use it properly.
- ☐ Card Index could be more flexible.

THE GOOD SOFTWARE FILE

UTILITIES EDUCATIONAL

Rotate

£24.95 • Proteus Computing/Trinity Business Systems • 01-748 2302

Rotate is a simple utility program to print out text files rotated through 90 degrees on the paper. This gives you more columns per page which will be needed for some programs, like large spreadsheets.

PLUSES - MINUSES

- ☐ Simple menu-driven program does just what it says
- ☐ Choice of four print fonts, which can be used to print unrotated files too
- ☐ The quality is nothing like NLO (e.g. the ordinary "high quality" print option)
- ☐ Only prints plain text, no subtitles, underlining etc.
- ☐ No specific support for non-Amstrad printers

Disc Mate

£24.95 • Siren Software • 061 848 9233

VITAL
TOOL!

Disc Mate is a set of CPM utility programs which bring complex disc recovery operations within the scope of CPM novices. Facilities include recovering erased files and making files "read only" (i.e. unerasable).

PLUSES - MINUSES

- ☐ Simple on-screen instructions once you've got started
- ☐ Allows easy recovery of accidentally erased files
- ☐ "ZIPDISC" program speeds up disc access by 10 to 20%
- ☐ Friendly file copying program in case you find CPM's PIP incomprehensible
- ☐ Can read both single and double density discs
- ☐ The instruction sheet is very brief, so you'll need to understand CPM basics

Pertmaster

£69.00 • Abtex Software/NewStar • 0277 220573

Pertmaster is a project planning aid. You specify the events, sequencing and durations of the component tasks of a project, and *Pertmaster* will analyse the job by Critical Path Analysis. It can detect errors in the plan, produce reports and crude graphical summaries.

PLUSES - MINUSES

- ☐ PERT charts and Critical Path Analysis are established planning methods
- ☐ Up to 500 activities may be considered at once
- ☐ Plans can be altered to see "what it..." results
- ☐ The PCW isn't really powerful enough to do it justice; it certainly needs a PCW8512
- ☐ Screen graphics are very weak; you can't get a graphical overview of the whole network
- ☐ It doesn't have simple default settings for a rough-and-ready plan

Amstat 1,2,3 and 4

£27.95-£39.95 • GJ & SC Coleman • Ashby-de-la-Zouch LE6 5DA

A suite of four statistical routines including a business analysis program, forecasting and resource management. All four cost £29.95. Sophisticated but perhaps awkward for beginners.

PLUSES - MINUSES

- ☐ Good range of statistical functions
- ☐ Good manual
- ☐ Can produce fair quality graphical results
- ☐ Some editing procedures very long-winded
- ☐ Needs some expertise to use properly
- ☐ Weak on checking that input data is reasonable.

Grammatik

£49.95 • Optronics • 01-892 8455

This program checks your grammar in the same way that a spell-checker checks your spelling. It also can check for "grammar" with a list of "gender specific" terms. It works on a WordStar or LocoScript file (in ASCII form) and points out real blunders.

- ☐ Shows up grammatical problems you never knew you had.
- ☐ Marks up existing text for re-editing.
- ☐ Lets you build up your own jargon dictionaries.
- ☐ Needs to be used intelligently.
- ☐ Can't spot errors in context.
- ☐ Expensive.

The VICAR

£29.95 • lanseyet • 01-607 5844

A programming tool for serious programmers. If you have a several-hundred line program held in several files on a disc, you can lose track of which variables are used where. The VICAR produces a concordance listing and other diagnostics, to help you find bugs and maintain the program.

PLUSES - MINUSES

- ☐ Easy to use but still flexible through use of options

- ☐ Amstrad versions all at a special low price
- ☐ Good manual
- ☐ Only of value on large programs
- ☐ Limited value to most PCW users (except BASIC buffers)

IT'S BASIC

£7.95 • Nabitchi Computing • 051-708 8775/0123

GOOD VALUE!

Games with a more serious intent. This program provides 20 simple games and applications, and allows programmers to look at the BASIC to see how it's done and adapt it for their own programs. You can play music on your CPM and create your own Space Invader figures.

- ☐ Twenty programs at rock bottom price.
- ☐ Invaluable tips for programmers.
- ☐ Costs little more than a blank disc.
- ☐ No tutorial guidance.
- ☐ Non-programmers may get bored.

ExBasic

£11.45 • Nabitchi Computing • 051-708 8775

EXCELLENT
VALUE!

A utility program which augments Malard BASIC's commands, allowing you to use quite sophisticated graphics functions. You can draw or erase lines, circles or dots, save and load screenshots of data, pause, beep ... all with commands like **PRINT "DRAW";100;200**. Guaranteed no machine code or POKEs needed!

PLUSES - MINUSES

- ☐ All functions done by simple BASIC PRINT statements
- ☐ No machine code knowledge needed
- ☐ Good range of simple drawing commands available
- ☐ Can save and load images once you've got them right
- ☐ Very cheap!
- ☐ Not quite fast enough for proper animations/games programs

Companion

£19.95 • Digital Integration • 0276 684959

Background program which provides a calculator, a clock, simple disc maintenance operations, a notepad, a phonebook, and a diary which can be used while using other CPM programs.

- ☐ Can be called up while any CPM program is running
- ☐ Calculator, clock and disc manager are easy to use.
- ☐ Permanent clock keeps good time.
- ☐ Good, clear manual.
- ☐ Notebook, phonebook and diary are too slow to be useable.
- ☐ Notepad functions need to use A drive - awkward for B256 owners.
- ☐ Doesn't work with LocoScript.
- ☐ Takes up over 3k of CPM workspace.

SuperType (née FontGem)

£19.95 • Digita International • 03954 5059

USEFUL
AND FUN!

A program for users of LocoScript and CPM programs, which modifies the fonts (ie. the look of the characters) used by the PCW printer. SuperType has 4 "business" fonts and 4 "novelty" fonts, like Old English. It works by directly altering the EMS files for LocoScript or CPM, so you only need run it once - after that, the new chosen font is automatically available.

PLUSES - MINUSES

- ☐ Once installed, you can totally forget it's there
- ☐ Genuinely useful range of fonts available
- ☐ Works with LocoScript as well as CPM
- ☐ All LocoScript's print sizes (except 15 and 17 pitch) and style options still work
- ☐ Doesn't take up any extra disc space
- ☐ You can't mix different fonts in the same document
- ☐ You have to have different work discs for each font you want to use

Personal Tax Planner

£24.95 • Digita International • 03954 5059

MONEY
SAVER!

A simple program which asks you all the questions relevant to your year's tax affairs, and prepares your tax return claim (or bill) for you. Useful to find out whether married couples would be better assessed separately or not. Annual updates for new allowance scales are available.

PLUSES - MINUSES

- ☐ Simple to use
- ☐ Needs a minimum knowledge of the tax law
- ☐ Forces you to keep your tax details in one place
- ☐ Limited application - you might only use once a year
- ☐ Can't cope with unusual cases (eg. hundreds of deductible investments)
- ☐ Program updates (for a new allowance level) cost £10

Mouse & Desktop

£79.95 • Advanced Memory Systems • 0925 413501

UNIQUE
USEFUL!

A whole new way of using your PCW – banish CPM for ever. For your money you get a mouse and software which emulates the GEM Desktop environment found on PCs. All commands are given by pointing to icons on the screen, not typing at the keyboard. You also get calculator/calendar (etc) utilities thrown in.

PLUSES • MINUSES

- A genuinely useful desktop organiser, with well thought out utilities.
- Well presented and easy to use
- Makes CPM commands easy
- The mouse can be used with a variety of other software
- Takes up a lot of space in the M drive
- Calculator and other utilities not available while running other programs
- Can be irritating if you are proficient with CPM and want to use it.

Universal Self-Start

£19.95 • Comix Software • 0462 682969

A utility program which helps you make up auto-booting discs from any program. This means having a single disc which can both start the PCW up and run your program. Bear in mind that you could do all this yourself for free if you can read the appropriate parts of the CPM manual.

PLUSES • MINUSES

- Foolproof system of questions leads you on
- Wide range of options for printer setup, eg. different paper sizes.
- Not comprehensive – doesn't PIP files across to the M drive, for instance
- No help with setting up the keyboard
- Program takes up 14k of the startup disc – you may need two discs anyway

EDUCATIONAL

Micro Maths

£24.95 • LCL • 0491 579345

WELL
DESIGNED

Supposedly covering 8 to adult ages, this seems an O-level type program, covering topics from calculus to tables. A good implementation on the PCW with proper use of the screen. Questions are picked at random from a pool, so may repeat but never run out. Replies to questions are typed in mathematical notation, like X^2+3

PLUSES • MINUSES

- You can pause to use BASIC as a calculator while you think
- 'Unlimited' question set
- Comes with a 'free' book of AEB O-level questions
- Good hints and explanations when you get an answer wrong
- Questions in a topic repeat occasionally
- Some frills, like the clock and beeper, are annoying
- No flexibility to add questions for a particular syllabus

lankey Two Fingers to touch typing course

£24.95 • lanysyst • 01-607 0187

IMPROVERS'
BEST BUY

Despite its provocative name, a useful typing tutor in that it specifically caters for people who can already get by on keyboards with two fingers. You are gradually introduced to touch typing, so your speed doesn't drop while you learn. Fills a necessary slot in the Typing Tutor market.

PLUSES • MINUSES

- Suitable for improving two-finger typists without much drop in speed
- Full on-screen instructions
- Exercise text is interesting paragraphs, not letter drills
- Explanation text is annoyingly verbose in some lessons
- It doesn't always ensure that the cursor is properly aligned with the exercise text

Animal Vegetable Mineral • World Wise

£14.95 each • Bourne Educational • 0794 523301

Aimed at the younger market, 7-15 year olds. Both these programs work by learning as the child uses them. Think of an object and the computer tries to guess it. If it is wrong, the child is asked for a question which would allow the PCW to be right next time, and it learns.

PLUSES • MINUSES

- Can be used as many times as the child's imagination holds out
- Performance can be analysed by a teacher after a session
- As you build up a base of objects and questions, they can be saved for reuse
- It needs a lot of typing, hence a lot of supervision
- The PCW starts with only two objects known, so it takes time to get going
- Documentation has hardly been altered from cassette-based versions
- Since it is for young children, more imaginative use of the screen would be nice

Better Spelling

£12.95 • School Software Ltd. • 010 353 61 27994

This is a spelling course aimed at the 8 to adult age group. It consists of a series of well-organised, short lessons each dealing with one topic, like plurals or which version of there/they're to use in a sentence. The use of the PCW screen is rather unimaginative, and doesn't hold your attention.

PLUSES • MINUSES

- Well thought out lessons to emphasise particular points
- Teaches words in a sentence context as well as in isolation
- Lessons can be picked in any order from a menu
- Seems to be proof against mischievous key pressing
- Boring use of the screen doesn't grab interest
- No instructions come as to how to use the program.

Tough 'n' Go

£24.95 • Carlton Software • 01-379 6502

A very traditional typing tutor, with no attempt at interesting screen presentation. Letter drills are rigorously pursued, making for good typing practice if you can stick it. Also has number keypad tuition for data entry operations.

PLUSES • MINUSES

- Methodical letter drills enforce good practice
- Provides number keypad tuition as well as letters
- Instruction screens are optional, so can be cut out for speed.
- Gives a flattering error rate, since it allows you unlimited use of the delete key.
- Doesn't tell you how to make the number keypad actually work on the PCW!
- Boring use of the screen. You need to really want to learn.

lankey Crash Course

£24.95 • lanysyst • 01-607 0187

A fairly traditional typing tutor, taking you through basic keyboard exercises. There's a lot of explanatory text, which gets in the way second time around. Definitely competent, but a bit boring.

PLUSES • MINUSES

- Mostly avoids boring letter drills
- Very full on-screen information guides you along
- "Fast" option cuts out some text if it gets repetitive
- Unimaginative use of graphics, compared to Computer One's tutor.
- It doesn't always ensure that the cursor is properly aligned with the exercise text

Chemistry • Biology

£12.95 • School Software • 010 353 61 27994

These two are fairly traditional question-and-answer tests. You are faced with a choice of 10 topics, and then asked 10 or so questions each, where you have to fill in the blank in a statement. There are preamble notes beforehand, and if you get it wrong you are given a clue. Aimed at 12-16 year olds.

PLUSES • MINUSES

- High standard of questions for O-level students
- Preamble notes introduce topics
- The fill-in-the-blank questioning style has little flexibility for different answers
- No option to add questions for a specialised syllabus
- Screen Chemistry formulae are difficult to read

NEXT MONTH

The guide continues next month with the categories of WORD PROCESSORS (including spelling checkers and mail mergers), GAMES and ACCOUNTS (including payrolls). The month after will cover DATABASES, COMMUNICATIONS and GRAPHICS, and the month after that it's back to this month's topics.

Our intention is to keep publishing the three parts of the guide in rotation, updating it each month to include all new products. If you would like to see other sections of the guide, back issues of 8000 Plus are available at £1.50 each.

Meanwhile, if you are aware of any significant omissions or errors in the File as published, please let us know. We intend to maintain it as THE authoritative guide to PCW software.

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GRAND CLEARANCE SALE

We have limited numbers of the following items which we're selling at silly prices to clear our shelves. It would be advisable to order by telephone to check availability. Great opportunity for bargain hunters!

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Only £69.95 (£30 off RRP!)

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Only £34.95 (£15 off RRP!)

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Only £39.95 (£20 off RRP!)

TOUCH 'n GO

Only £17.95 (£8 off RRP!)

BATMAN

Only £8.95 (£6 off RRP!)

TOMAHAWK

Only £13.95 (£6 off RRP!)

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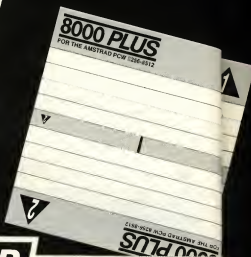
One of the most annoying things about 3" discs is that they aren't normally supplied with spare labels. That's why we designed our own (and gave away over 300,000 with the June issue of 8000 Plus.)

If you want some spares, we have them in packets of 20, four different colours, five of each colour. They're £1 a packet, provided you order something else at the same time. (You could simply buy an extra packet!)

A neat way of keeping your discs well organised.

A.M.S. DESKTOP (with Mouse)

Only £69.95 - save £10!!



SPECIAL OFFERS SPECIAL OFFERS

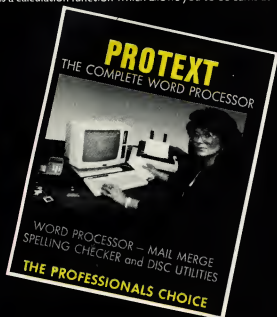
PROTEXT

Only £69.95 – save £10!!

This word-processing package from Amstrad-specialists Amnor has won almost universal acclaim as the PCW owner's best alternative to LocoScript.

As well as being cleverly designed and packed with features, it's dazzlingly fast – you'll be able to dart through a document like greased lightning.

The word-processor includes word-counter, fast search and replace, and has numerous slick touches such as a calculation function which allows you to do sums at



the keyboard and then place the result automatically in the document.

What makes the package particularly good value for money is that it includes the much-praised spelling checker *ProSpell* AND Amnor's excellent mailmerge program *ProMerge*. So with a single purchase you can probably satisfy all your word-processing needs.

If you've been brought up on LocoScript, you'll find *Protext* takes some adjusting to – commands are issued by means of brief key sequences rather than pull-down menus. But these are logically thought out, and help is available on screen at any time.

If speed of use is high on your list of priorities, *Protext* could be the software you've been waiting for.

BACK ISSUES

We have limited stocks of the following issues only. They cost £1.75 each including P&P.

FEBRUARY

Guide to upgrading your printer. Reviews of *Protext*, *Trivial Pursuit*, *Strike Force Harrier*, *FT – DB*.

MARCH

Transferring files to a PC. Reviews of *Masterfile*, *BCPL*, *books*, *The Pawn*.

APRIL

Using spreadsheets, reviews of *Cavalier* accounts, *Stockmarket*, trouble-shooting *LocoScript*.

MAY

LocoScript 2 reviewed in detail. Also *Newsdesk*, *AMX*, *Mouse*, modems, public domain software.

JUNE

Fleet Street Editor reviewed. Step by step memory upgrade guide, reviews of *Rombo* digitiser, *Head Over Heels*. Free disk labels.

LORD OF THE RINGS

Only £16.95 – save £3!

This classic adventure brings to your computer Tolkien's epic tale of hobbits, orcs and the clash of good and evil. It combines detailed graphics with impressive text handling to lead you into that famous kingdom of mystery and adventure.

A stylish, highly-recommended computer entertainment which we're pleased to be able to offer at £3 off the normal £19.95 asking price.

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**8000
PLUS**

TIPOFFS

The collection: issues 1-6

A Peek at the Contents On LocoScript

Major articles on Headers and Footers, Tabs and Rulers, Printing Tables, and Laying out Business Letters. Plus scores of tipoffs: Overprinting, Foreign characters, Creating a letterhead, Better Underlining, Typing ahead, Speeding up Long Documents, Using Phrases, Mathematical symbols, Two-column printing, and numerous others.

On CP/M

Major articles on Disc-Handling (including how to make an auto-start disc), Customising individual keys, Controlling the Printer, RPED, SETSIO and DEVICE. Plus tipoffs on using PIP, function keys, screen printouts, SETKEYS, avoiding problems with DISCKIT, and many more.

Other TipOffs

Feeding Continuous paper, Label printing, Using A5 paper, Ribbon re-inking, Screen contrast, the free game of Life on your master discs, Boot discs for Cracker and NewWord, and a host of slick little tips for Basic programmers. To mention but a few.

At last the publication you've been clamouring for is here. We've put under a single cover the complete range of TipOffs published in the first six 8000 Plus issues. And there's more: the series of (so we're told) outstanding tutorial articles on LocoScript and CP/M reprinted from those issues.

To tie the whole package together is, published for the first time, a comprehensive index. So now at last you can turn instantly to the information you know we published somewhere but can't remember where.

So much material was covered in the first six issues of 8000 Plus this compilation is certain to become a constantly used reference book. Apart from anything else, it offers a chance to catch up on the bumper tips sections in sold-out issues 1 and 2. *The 8000 Plus Tipoffs Collection* is printed on high-quality paper with a colour cover and we think it deserves a permanent place next to your PCW.

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SPECIAL OFFERS



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- You're protected against any future price rises.
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THINK!

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HEAD OVER HEELS

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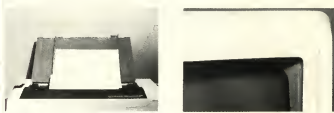
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POSTSCRIPT

The pick of the past post perused by a ponderous Ed.

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PEEK-a-boo

Several of your previous contributors have passed on tips using PEEK or POKE in Mallard Basic. How do they come by this knowledge? Is there a complete list of PEEKs and POKEs to be had anywhere? I would dearly love to get my hands on such information.

Terry Dwyer
Quorn, Loughborough

I don't know of any such publication, although there seems to be a manual of this kind for every other computer ever sold. Probably your best bet would be to join a local computer club and hope that you find a friendly hacker.

Tell-tale smudges

I thought this PCW8256 was great till I began to print out letters to clients. If you look at the top and bottom edges of the paper, in the centre, there are black smudges. As printers we cannot send inferior quality letterheads to our clients, I would hate them to think that those black marks were caused by our factory during the printing process. It appears to me that the better the quality of the paper, the worse the smudge. If the Amstrad PCW8256 is not designed for good quality paper then this fact should be in the advertisements. Please inform me of the maximum weight of paper that will pass through the printer without smudging.

I cannot be without my word processor, I must have high quality print - as is intimated in the

advertisements. Do Amstrad realise that there is probably a design fault somewhere?

Jennifer Henley
Ealing

The solution is simple: before you put a sheet of paper in the printer, remove the ribbon cassette then replace it afterwards! But seriously, it seems the printer will feed up to 80 gram paper easily, but 100 gram Conqueror smudges as you describe. Most people aren't bothered by this, but if printing is that critical to your business, might it not be worth investing in a high quality printer?

Take two aspirin

Dear Doctor - A friend of mine has got this problem and I was wondering if you or any of your readers could help him. He is a student and uses his PCW for notes and essays. However having got near to a full disc of notes, I...err, I mean he decided to try to use the other side of the disc for further notes.

He formatted side B of the 'double sided double density' disc using Diskit. When he checked the A side of the disc he found the error message 'disc address mark missing' and thus could not get to his notes. Side A was originally formatted CF2 DD using Diskit.

"Can you only use one side of double density discs?" he asked me. If not how should he go about setting up side B without losing the data on side A? And finally he asked with a tear in his eye if there is any way of retrieving the original data

(other than re-typing in the hard copy). If anyone could help I would be very grateful - and could pass on the information to my friend.

Martin Dive
Hull

P.S. We both find 8000 Plus to be the best magazine on the market.

Seeing red

"Hopefully some more realistic legislation will appear over the coming years," concludes your unnamed contributor's article on the Data Protection Act in your May 1987 issue - but the only person who can say that is one who hasn't been paying attention to the political climate of the past eight years.

The fact is that the Thatcher government couldn't care less about civil liberties and the right to know, and has made more use of the discredited Section Two of the Official Secrets Act to silence its critics than any other post-war administration. Indeed, as its assault on the BBC over the Zircon Affair showed, it's more concerned to withhold information from us than to allow anyone to find out what it's doing.

So why, then, did it pass the Data Protection Act? For no other reason than that British data processing firms were losing business to their European competitors, all operating under the umbrella of the European Convention on Data Protection and all their activities thereby safeguarded. Until it passed national legislation of its own, Britain was barred from participating in this data traffic - and the provisions of the data Protection Act 1984 are in fact only the minimum necessary to comply with the European Convention. Allowing people to inspect their files is, as far as the government is concerned, merely an unwelcome side-effect.

The Data Protection Act 1984

The B drive has disc heads on both sides of the disc (hence 'double sided'), and when you store a file the drive works out which side of the disc to put it on, depending on how full each side is. This means you can't turn the disc over, and you only ever format a B disc on one side - formatting the other side reformats the first side at the same time and loses all your data. As you now know.

Getting the PIP

I am writing a program in Mallard Basic which will handle home/bank/building society accounts. It would be advantageous to have files on drive M (for speed and to save the disk from undue work) when required, but I cannot find a satisfactory method of copying from disk to drive from within BASIC. It is not acceptable to copy all files at the start (using PIP in PROFILE.SUB) as the size of drive M is too small. Likewise I do not want to use the SYSTEM

may indeed be a precursor to future legislation - but only after a change of government. Until then, it will be regarded as the end of the road, not the beginning.
Joseph Nicholas
Pimlico

I think that is all a bit cynical. The Act was drawn up by various committees of varied political composition, and to cast it as an attack on democracy seems a little tenuous. It depends on whether you subscribe to the cock-up theory or the conspiracy theory of life - the Data Protection Act seems firmly in the former camp.



command at the program's end then have to SUBMIT a CP/M routine copy back to A. The other possible method - read each record, write new file - is also much too cumbersome (and difficult with keyed files)! All I want is something like KILL or NAME which will copy a file and when required. Am I asking too much?

P E Bishop
St Ann's, Nottingham

I'm not aware of any Mallard BASIC command which duplicates the copying facilities of CP/M's PIP. Your record-by-record method seems the only solution. However, rest assured that if there is such a command, I will receive hundreds of letters from BASIC hackers ... watch this space.

Defender of the faith

I bought my 8256 in anticipation of a large postal order from the insurance company and in the since-realised hope of consoling myself for the loss of the family heirlooms in a recent burglary. One of the first things I used it for was making a (long) list of the items stolen.

I've been interested in your articles on passwords and computer security as I wouldn't like Killer, my pet Alsatian, to hack into the budget forecasts for his diet of tinned burglars. However it has just struck me that now I have no family heirlooms to be nicked what I would least like to lose is my discs - monetary value about £2.50 - real value hundreds of hours of work or fun.

I've made back-ups of my back-ups (are they called grandfathers?) which my bank keeps in a safe deposit in exchange for £15+VAT a year. I suppose I could wrap them in a carrier bag and bury them in the garden but Killer is still young and has not yet learnt to differentiate men with striped trousers carrying bags marked "swag" from old bones or CF2's - or for that matter grandfathers.

Bill Jackson
London SW12.

Blatant favouritism

I was about to write to you with a mini moan when I saw the letter from Roger L. Paton in PostScript (May B7).

The point? Well I, for the reasons outlined by Mr. Paton, placed my order with our small village newsagent who gets his cut as well as yourselves - great, don't let's get too greedy lads. But now I see you offering all sorts of goodies, the collection of Tip-offs being most desirable for free or

£1.95 but only to those who subscribe direct! Are we unclear or something? Come off it chaps - fair dues - I have a regular order placed with my newsagent so I'm doing my bit to keep you afloat as well as my newsagent. How about treating us all alike?

Bob Woodhouse
E. Bridgford, Nottingham

The key lies in your last sentence: 'How about treating us all alike?' The truth is that not all readers treat us alike. Subscribers pay us full cover price in advance for their copies (thank you, thank you), but if you buy from a newsagent we get around half price several months later. We feel it is only fair to reward subscribers with these offers, since they have been kind to us.

Foreign spellings

A suggestion which might help Mr Davis with his desire for foreign language spelling checkers: all he really needs to do is use LocoSpell and make an extensive user dictionary.

Monica Lane
Leyland, Lancs.

It would be a chore for the first few documents, with every single word flagged as wrong, but it would work. Incidentally, Armor sell Protext in Germany and want to start selling a German version of their Prospell spelling checker - contact them for a price over here. Locospell too say they are working on foreign language versions of LocoSpell, but this would seem to be some time away.

Autobooting yourself

Boing...Boing...Splat...Boing... Sorry, I was just cheating on Booter with that cheat mode you mentioned last month, it's great! I'm sure those monkeys remind me of someone...

What I was actually trying to write about was the fact that recently lots of people have been bringing out packages to make start-of-day discs for you or user friendly replacements for the "dreaded A> prompt" as you put it.

I can't understand what all the fuss is about! If you just spend a little time reading through the manual (not the best manual in the world I agree but perfectly readable) you will be able to do all these things yourself. You'll never be able to tailor the system to your own needs if you just follow a series of keystrokes instead of trying to understand what you are doing.

Slipped disc treatment

I have taken particular interest in the disc errors reported in your pages, particularly those with "sector mark missing" or "data error" and the like. I have been helping a number of PCW users with similar problems and have made some progress which you may wish to report.

A friend asked me to help him with a disc error of this kind recently. The damage did not look like accidentally 'dumped' program or data files, but I sent the printout to AMSTRAD in case there was an unsuspected or latent bug in the software. Their reply read, "...please be advised that drive B should record and distribute data without error. However it has been found that on certain conditions the drive B can cause corruption. I would stress that this is very rare, and normally never appears during the whole life of most machines."

I think this might be worth publicising, to help others to avoid the loss of valuable data. If this is the cause, backing up discs might not be the answer, since the backups may also be liable to corruption under similar circumstances.

My advice to all 8512 owners

An example of what you can do is my BASIC. I turn on, put it in the drive and BASIC loads automatically, asking you to wait, a pretty picture is drawn (courtesy of the electric Studio Lightpen) and a man walks across the screen and says hello.

...Boing...Boing...Boing...
 BEEEEEP...Boing...Boing...
Roderick Barnes
Fleet, Hampshire

You are certainly right that with a little effort you can set your PCW up for free. However, it depends whether you regard computing as a hobby or a chore - many businessmen would rather buy an off-the-shelf solution that waste a week reading manuals. And how far do you take it? Do you not buy a database program because you could write one in BASIC for yourself?

What the eye don't see

Artificial Intelligence! I think we are all being fooled by our little grey boxes - it's already here.

I happily renamed my Logo file 'circlelog' to 'cilog', but then spotted that I didn't have RENAME.COM on my disc. Realising its mistake in executing a command it had no file for, CP/M subsequently clammed up saying

would be:

a) keep backup copies anyway,
 b) get and learn to use the public domain disc recovery programs DU and NSWP. An hour spent learning to use these free programs will be well repaid with the power gained in unearthing files accidentally erased, copying LocoScript groups from one disc to another, back up groups, etc. anyway.

If any reader has disc problems I would be pleased to offer a similar 'help' service on repayment of costs such as postage, telephone, etc.

David G. Smith
41 Tuttham Way, Paddock Wood, Kent TN12 6UA.

Sounds worrying. Having rung Amstrad to check, they say that the electromagnetic shielding on the B drive unit is not as strong as the A drive's. Perversely, discs are most at risk when in the drive, because the disc shutter is pulled back. It is mainly TVs, telephones and printers that cause trouble, so if you can put your printer on the left of the monitor rather than by the disc drives, you will be safer. But they repeat, problems are very rare.

'RENAME.COM required' when I tried it again. Sneaky.

OK so I'm crazy but can you explain it? This is for real. No practical jokes. It actually happened. Can it be explained?

Andrew Turnham
London SE23

The same is true of a couple of other commands, ERA and DIR. You can do DIR no matter what disc is in the drive, but try typing DIR [FULL] and you will see the message 'DIR.COM required'. In other words, simple REN, DIR and ERA commands work all the time, but you need the .COM file present for complex operations, or if an error needs to be reported.

Generations of discs

I have a program set out by The Church of Jesus Christ of a 'Personal Ancestral File Management' on 5¼" discs, and as a condition of sale have been given permission to copy it onto 3" discs for my Amstrad PCW8512. There are 4 discs to the program, and it is a CP/M (Kaypro) Version. So far I have not been able to find a place that can, or will, do the copying for me. I presume that it is possible to transfer from 5¼" to 3" disc.

Can you help me in my endeavour to use this most

POSTSCRIPT

excellent program on my PCW?
Any suggestions would be helpful.
D.I. Armstrong
Bristol.

One company we know of who will do this is Grey Matter (2 Prigg Meadow, Ashburton, Devon - tel 0364 53499). They charge £10 copying fee per disc. If you are a good salesman, you might be able to convince the package's distributor to share the cost with you, since they might make other sales to PCW owners.

Printer problem solved

With reference to Donald Richards' letter (erratic printing from his PCW printer): as a computer consultant with a well known High Street store, I have come across this problem more than once. The solution every time has been incredibly simple: check the printer connection at the back of the monitor. On every occasion so far, I have found that the plug had worked itself loose in the socket and re-insertion solve the problem.

Whilst I cannot guarantee that this solution will cure Mr. Richards or anybody else's similar computer affliction, it is certainly worth a try and will undoubtedly save the time, trouble and expense involved in returning the computer for repair.
I.D. Fell
South Humberdale.

Golden Oldies

Reading your report in the June issue "End of the BS12?" prompts a question in my mind, as a novice, a senior citizen and the proud and satisfied owner of an BS12. Given good dust protection and moderate but regular use how long will my BS12 last - as from last July? What is there to go wrong? If anything did go long in the long term who should repair it?

I plan, of course, on present form to live at least until AD 2000 when I shall be 79! By then I should know my BS12 fairly well.

John Waddington
Ely, Cambridgeshire

It's likely to be the mechanical parts of the PCW that let you down first - your keyboard and disc drives. At a rough guess, I should think that you could feel a little aggrieved if your PCW died before its fifth birthday, and if it saw its second decade you should think yourself lucky. Certainly it has already been on sale for two years, and there haven't yet been significant failures.

Martian chronicles

I'm an old-timer, having had my BS26 since way back on the 1st December 1986. I use it mostly for correspondence in connection with my hobby of collecting (and sometimes publishing) "fanzines" - amateur magazines for sf readers. I have only a proportion of the 20,000 which have been published, but enough for me to dream of a database to catalogue them. I don't want to list just an editor/publisher and the title. I want an explanatory description as well, such as:

HUGHES, Ted (USA)
MOTA-No6-72-4pp. on
fandom by Creath Thorne;
Grant Canfield hilarious on
being a domino junkie
(24x4Q)

That is, editor, country, title, number and year, brief description of some items, and a note that the size is 24 American Quarto pages. I try to keep descriptive matter to where I can confine it to a single line of 17 cpi characters, although with certain editors/fanzines there's historical background to add.

At the moment I go from card index to PCW, cut-and-paste job to electro-stenciller, then duplicator. I'm probably asking too much of a simple BS26 (don't mistake me - it's still my heart's delight), but is there any better way to index and add to the list?

A. Vincent Clarke
Welling, Kent

What you ask is the kind of thing that most databases are capable of. Unfortunately there is no escaping the hard truth that you have just



got to spend some long hours with a manual - databases are inherently complex beasts. For instance, Database Manager (At Last) and Masterfile 8000 would both suit you, as would many other programs (he adds quickly, before all 17,000 other database manufacturers write in complaining). It is sometimes possible to incorporate pitch changes into database printouts, but your best bet is to output the data to a disc file rather than direct to the printer, then read the output into LocoScript. Now you put in all the necessary bold, underline etc. commands, and correct last minute typos.

Elite NewWord

I run NewWord on a PCW BS12, and I would like to use more of the generous screen width the PCW provides, and also print in elite (12 pitch) text. The problem is with the printing. The two available commands to get it to do so (`cw 10`, and `ctrl PA`) seems to confuse the poor machine, making it cough and sputter its way across the page (in what indeed looks like elite) at a great deal less than a snail's pace. The poor thing looks like it's having a fit.

A phone call to Newstar resulted in the suggestion of trying the other printer drivers supplied on the NewWord disc. No success there, and anyway, it should work with the default (MX80) driver supplied for the PCW machines.

Any simple solution, or do I need a new printer driver?

Derek Edwards
Loughborough

The joy of LocoScript

I enjoy your magazine very much and I must congratulate you on the magnificent layout of the front covers, always colourful, artistic and imaginative.

I eagerly read the articles on LocoScript 2. They were very well done but I feel I must take you to task on a few points.

Firstly, it seems incongruous to

be speculating about LocoScript 3, and even LocoScript 4, in dominating yellow rectangles, on the very same page where LocoScript 2 is being reviewed for the very first time. It's almost as though you were determined to detract from the joy and excitement of the advent of LocoScript 2, at all costs.

Secondly, you do a lot of unjustified carping about there being no word counter in LocoScript 2. What you seem to have totally failed to appreciate, in this context, is that LocoScript 2 costs only a mere £19.95, a ridiculously low price. I'm sure Locomotive could have incorporated a word counter at a higher price but being a bit more mindful of the cost to the customer than you need to be, perhaps, they very wisely did not do so. Why should the thousands who would never have any need for such a feature be forced to pay extra for it?

John O'Sullivan
High Wycombe

LocoScript 2 is certainly excellent value, and we weren't for a moment trying to put you off using it. Even so, no software is ever perfect and it is the job of a reviewer to let potential purchasers know what isn't there as well as what is. As you say, the large majority of PCW users will find LocoScript 2 a good buy.

Back to the future

"LocoScript 2 Is Here" - Issue 8. Without wishing to be seen as a pedant I feel that the title to your interesting article on LocoScript 2 was framed in the wrong tense. At the time of first reading your article I was ploughing through the compilation of a small firms guidebook on my trusty PCWBS12. It was anticipated that the end product will probably contain upwards of 40,000 words and in spite of having carved the text into manageable chunks (separate files) scrolling with LocoScript 1 seemed like the word processing equivalent of a perpetual motion machine.

However a solution then seemed nigh and a mid-April telephone call to Locomotive Systems discovered that although LocoScript 2 wasn't immediately available the despatch of such software had been planned for the end of the month. I was also informed that "the sooner we receive your order then the sooner we can supply the goods" and so in naive anticipation my order was posted the same day.

The end of the month has of

course since come and gone and when I made further enquiries this morning I was told that due to technical problems the dispatch date had slipped a further 4 weeks to the end of May. When the end of May comes around though I wonder whether I will be expected to hang on to the end of yet another month?

Clearly these difficulties rest solely with the suppliers, Locomotive Systems but evidently LocoScript 2 is not here! Perhaps 8000 Plus would consider pressing Locomotive Systems for a reliable estimate of the true availability of LocoScript 2?

David Purdy
Littleover, Derby.

Well, it's the old story - it seems manufacturers just can't estimate development times reliably. Our review was conducted on a pre-production copy, and there were 'unforeseen difficulties' in getting to the final version. Locomotive say you should have your copy by the time you read this. To be fair, (a) Locomotive haven't cashed any cheques yet, and (b) it isn't just them. Apart from other PCW companies, IBM recently made a major launch of their new PC range. When pressed, they admitted that although you could buy the machine now, the software (OS/2) wouldn't be ready until 1988. And no-one calls IBM names unless they want a midnight knock on the door.

'Allo, 'allo

I have been trying to find out for some time how to access the French Teletel system (French Yellow Pages and much more) using a PCW. Having gathered snippets of information from Intermap, Aldoma and others I still don't know exactly what adaptation board or software are required nor where to get hold of them.

I have a WS4000 and Chitchat Combo and would be grateful if anyone out there can supply the answer.

Chris Smith
Taunton, Somerset.

Any offers?

Lost memory

My purchase of SuperCalc2 to run on my PCW 8256 has given me a lot of fun. However, as my spreadsheets grew more ambitious I found that the 31K memory available for them was proving restrictive. Then I saw your comment on SuperCalc:

"Spreadsheet size is limited by

memory, not disc space". So I lugged the VDU off to my friendly supplier to get its memory upgraded from 256K to 512 K.

Alas! There still seems to be only 31K to spare for the spreadsheet. How the devil do I get access to all that new and idle memory? I can PIP all the programs over from A to M except for three - SC2.COM, SUPERC.SUB and SUBMIT.COM - which are all listed in the Supercalc Disc directory but not in the CP/M directory for the same disc, where they seem to lurk behind the cryptic note "system file(s) exist". Scope for a tip-off?

Norman Donaldson
Oxton

Ah well, there's memory and there's memory. The extra 256k of RAM that you can fit to an 8256 only extends the storage space for files on the M drive. Unfortunately it has nothing to do with the workspace available for programs to use, and I'm afraid there is no way round this. You must either split your spreadsheet down, or invest in ScratchPad Plus which can handle large files.

Blocked by PIP

I graduated to a PCW8256 via a Sinclair Spectrum and therefore consider myself reasonably computerate. However one CP/M problem has me baffled and your help would be appreciated.

In order to get the CP/M utilities on a working disc I use PIP to transfer what is required to M drive - which works without problem - and then try to PIP to disc. After a little whirring from the disc drive I usually get an error message that will say for example DISK WRITE NO DATA BLOCK - A: ERASE.\$\$. I cannot find this error message in the handbook. Can you shed any light?

J.W. Woodhouse
Byfleet, Surrey

This is PIP's friendly little way of saying 'Sorry, your disc is full'. You will have to erase some files before you can put any new ones onto it.

Personal question

Having just tried to turn all the 'we' words into 'I' words in a long document using the FIND/EXCHANGE key I was very cross to see that the machine had interpreted this to also mean every single combination of the letters 'we' WITHIN other words! For instance it took it upon itself to change 'showed' and 'answer' into 'shold' and 'anslr', 'were' into 'lre' and 'week' into 'lek'. No doubt

enterprising of it but not exactly helpful.

Rosemary Rawlins (Mrs)
High Wycombe, Bucks.

As you now know, computers take every command literally. The trick with LocoScript is to ask it to exchange all occurrences of space-WE-space into space-I-space. The space either side ensures only whole words are picked up.

King of the inkers

Many highly regarded magazines such as yourselves are now running articles on the re-inking of fabric ribbons to give them a new lease of life. However no magazines are pointing out the hazards of such a service.

We are one of the South's leading suppliers of ribbons to the end user and have fully investigated the re-inking service (going to such lengths as having one of my PCW ribbons re-inked twice) and, as I have been told by many others, I have found either that the ribbons have been returned over-inked or, as is common, the ribbon fabric has been stretched causing endless

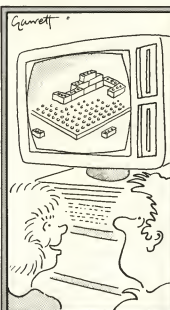
problems feeding through the mechanism in the printer.

This stretching is caused by the constant weight of the print head hitting the fabric and pulling at the material. If a ribbon is constantly re-used then the ribbon may stretch and become thin, causing character impressions on the actual roller.

I feel these problems should be pointed out to the general public, especially after reading your article "Old Ribbons Never Die" in the latest issue. I am not knocking the service - maybe once is fine, as is the widely acclaimed WD40 method - once.

Beverley Peck
HSV Computer Services Ltd,
Basingstoke

Ah, but then you've got a vested interest in seeing people buy new ribbons rather than re-ink. Re-ink specialists Kado, who have a vested interest the other way round, reckon you can get 'dozens' of inkings before the fabric gives out. The truth probably lies somewhere between the two.



"ARE YOU SURE THAT'S LOGO YOU'VE GOT THERE?"

BASIC vs Logo

I quote: "Logo would really only be used as a hobby... those who will get the most from it are people who have a modicum of BASIC programming and want to pick up Logo as a second language." (book review, June)

Rubbish! BASIC is certainly faster at the moment! But it is really possible to say that it is easier to use than Logo? BASIC is a language which, although it is always been prodded forwards by

such marvels as the programmers at Locomotive, has its face pointed to the past. Logo meanwhile, is a language going forwards and facing forwards. Logo is a way for the micro-user to get into the world of Artificial Intelligence and can be used as a stepping stone to such languages as LISP and Prolog or as a rigorous language in its own right.

Don't, as the phantom reviewer said, learn Logo simply to get at high-resolution graphics. Use it to get at the high-resolution programming techniques instead.

After the diatribe, the sackcloth. I must apologise for the tiny program of mine you printed in the June Postscript which was meant to implement the TOWARDS primitive fully. Somewhere between Logo and LocoScript the little procedure changed. It should have read

```
to point :a :b
  seth towards (:list :a :b)
end
```

John Connell
Elton, Aberdeenshire.

"Which is the best programming language" arguments sound very much like "which is the best football team" arguments. Sorry for insulting your team, but when you say 'BASIC is certainly faster at the moment', aren't you rather scoring an own goal? It seems sensible to make recommendations to readers on the basis of what can be done now, not in a few years time.

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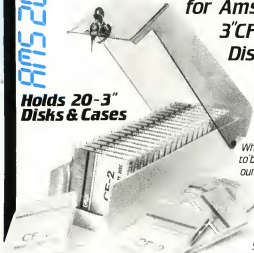
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